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THIRD ANNUAL MESSAGE

OF

SAMUEL H. ASHBRIDGE

MAYOR OF THE CITY OF PHILADELPHIA

WITH

ANNUAL REPORTS

OF THE

DIRECTOR OF THE DEPARTMENT OF

PUBLIC SAFETY

AND

CHIEF OF THE ELECTRICAL BUREAU

FOR THE

YEAR ENDING DECEMBER 31, 1901

ISSUED BY THE CITY OF PHILADELPHIA
1902

PHILADELPHIA
DUNLAP PRINTING CO., 1332-36 CHERRY STREET
1902

OFFICE OF THE MAYOR

PHILADELPHIA

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Secretary
ARTHUR R. H. MORROW

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GEORGE W. SEEDS

Contract and License Clerk
JOSEPH F. JONES

Stenographer
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Clerk
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GEORGE A. WELSH

Messenger
WALKER B. WEBB

Secretary Civil Service Board
ROLLA DANCE

Stenographer
JOSEPH MARCUS

Clerk
WILLIAM WEAVER

THIRD
ANNUAL MESSAGE

OFFICE OF THE MAYOR, CITY HALL,

Philadelphia, April 1, 1902.

To the Select and Common Councils
of the City of Philadelphia.

GENTLEMEN:—In pursuance of the requirements of the Act of Assembly of June 1st, 1885, I have the honor to transmit herewith my third Annual Message, accompanied by reports from the following departments of the city government, to wit: Department of Public Safety, Department of Public Works and Department of Charities and Correction, together with reports from the Receiver of Taxes, City Treasurer, City Controller, Law, Education and Sinking Fund Commission.

A vacancy in the Board of Directors of the Department of Charities and Correction, caused by the resignation of Albert H. Dingee, was filled by the appointment of Hon. John M. Scott, in May.

DEPARTMENT OF PUBLIC SAFETY.

The high standard of the various Bureaus of the Department of Public Safety, has been maintained under the direction of Abraham L. English, who has given unremittant attention to the duties of his office. The prevalence of smallpox and other contagious diseases, an epidemic of which was at one time threatened, has demanded greater activity and vigor than ever before, and good citizens cannot fail but to derive satisfaction from the study of the details of the very full reports of his Department and Bureaus under his jurisdiction. Touching so closely the health, life and property of all our people as do the Bureaus in this important Department, the reports cannot fail of commendation.

Bureau of Health.

Although during the year 1901, smallpox was to some degree prevalent in the city, as it was throughout the entire United States. It is gratifying to note that the death rate, with the exception of one year, was the lowest reported in this city since 1879, it being 18.26 per one thousand of population, or, one death in each 54.74 living persons. This percentage is considerably less than the average death rate, which was recently about twenty to one thousand of population.

The history of smallpox, which at one time threatened to become epidemic in this city, and was only checked by the intelligent and scientific work of the Department of Public Safety and Bureau of Health, is interesting as showing how negligence on the part of physicians, or carelessness on the part of the people, may bring about a serious condition.

In December, 1900, there was not a known case of smallpox in Philadelphia. In January, however, appeared a sporadic case in West Philadelphia, and in February another in the southern section of the city. These cases were isolated and no infection occurred. In the following March, however, a resident of the Thirty-seventh Ward developed a mild case of smallpox upon his return from a visit to Altoona, where he had stopped at an infected house. He neglected to send for a physician. Subsequently his wife had a light attack, and later one of the sons, whereupon the family became alarmed and sent for a physician. Meanwhile, the family had been receiving visitors and making visits. The third case was diagnosed as smallpox and sent to the Municipal Hospital, but in spite of isolation and other sanitary precautions, another son and daughter took the disease. These two latter and the first son attacked, all died. From that time on smallpox spread all over that section of the city, although it is probably the best sewered and best paved and cleanliest section of our municipality.

Toward the close of the year, when cold weather set in, the danger of a further spread of the disease was, of course, enlarged. By means of a liberal appropriation on the part of your Honorable Bodies, which enabled the Department to take every precaution known to sanitary science, however, smallpox was kept within bounds. A special corps of vaccine physicians was organized, while each district had likewise its quota of vaccine experts. It is probable that fully five hundred thousand successful vaccinations were made up to the first of this year. In addition, the disinfecting corps was largely increased by the employment of many temporary assistants, and these were supplied with the very latest and most approved form of disinfectants. In addition to this, every infected house was placed under quarantine guard. These precautions proved so effectual that the dread disease was kept within bounds.

In this connection I cannot do better than to refer to the recommendation of Dr. William M. Welch, who is recognized as the very highest authority upon infectious diseases and the efficacy of vaccination, and I will quote the report of the Director of the Department, as follows:

"I believe it is absolutely necessary for the health of this community that an Act of Assembly should be passed requiring compulsory vaccination and revaccination. The time taken in the operation is so slight and the effects in the way of suffering not such as to prevent the transaction of business, that there is no good reason why every individual should not be submitted to vaccination. A public record should be kept of these vaccinations, and every person should be required to be revaccinated at each recurring five years, or as often as necessity therefor shall arise. The question of revaccination is a very serious one in the public schools, and frequent inspection should be made in order to see that the children are free from the symptoms of disease. A simple statement of fact, that not a single case of a recently and successfully vaccinated person has been admitted, to the Municipal Hospital suffering from smallpox, together with the record of two hundred vaccinated employees, physicians and nurses, at the Municipal Hospital, not one of whom has been stricken with it, is ample and practical proof of the efficacy of vaccination."

In this connection I would refer to the many improvements made in the Municipal Hospital during the year, made possible by the wise legislation of your Honorable Bodies, and which has enabled the Department to take such precautions as it has.

A committee of your Honorable Bodies during the closing quarter of the past year examined many proposed sites for the re-location of the Municipal Hospital. Many unexpected difficulties were encountered as no locality desired to have the institution near them because of the fear of the contagion, so that the committee found it impossible to recommend a desirable location. I feel confident, however, that at an early date not only will a suitable site be found and purchased, but that the new buildings will be begun.

Bureau of Police.

The report of the Bureau of Police would indicate that crime is decreasing, there having been 4,441 less arrests in 1901 than in the preceding year, which is accounted for by the very large percentage of decrease in reports of the lesser forms of crime.

A satisfying incident of the report is that there was a decrease of 774 in the number of arrests for intoxication and disorderly conduct.

The operation of the present laws governing the license of saloons has been so satisfactory as to lead to the conclusion that it would be unwise to amend or repeal the laws as now laid down upon the statute books of the State. While a sister city is distracted upon the question of Sunday liquor selling, the experience of Philadelphia goes to prove that it is better for the interests of the community that there should be one entire day in the week when liquor cannot be openly and legally sold. In this conclusion of the Department, I heartily concur feeling convinced that no other one thing tends so much to conserve the peace and quiet of the Sabbath day.

The enlargement of the staff of the Fire Marshal a year ago, has produced admirable results and this branch of the work has proven itself a very valuable adjunct to the work of the Bureau.

As in my previous messages to your Honorable Bodies, I am constrained again to dwell upon the necessity for enlarging the force of the meat and cattle inspectors. The slaughter of animals for food purposes is continually increasing each year by a large percentage, yet for many years there has been no increase in the number of inspectors. This matter concerns the health of our people so closely that it is one of serious moment to the Executive Departments of the City. Too many safeguards cannot be thrown around the inspections of meats and an adequate force of inspectors should be employed.

Bureau of Fire.

Philadelphia still stands pre-eminent among the cities of the Union for the skill, efficiency and fidelity of the men connected with the Bureau of Fire. The Bureau is entitled to the very highest commendation for the protection of life and property. The constant growth of the City adds annually about five or six thousand dwellings or stores, thereby extending the area to be protected by the outlying companies and the continuous increase in our population makes the demand, urgent, for an increase in the number of men and apparatus in this Bureau so as to afford even more ample protection against fire.

Building Inspection.

The report of this important Bureau of Building Inspection exhibits a most satisfactory increase in the growth of the City and in the value of the buildings erected, the latter exceeding by $1,250,000 that of the highest record of any previous year in the City's history and exceeding that of 1900 by nearly $9,000,000. There has been some discussion recently regarding the construction of fire proof buildings. It can be said in commendation of the work of this Bureau that every Act of Assembly and Ordinance of City Councils have been rigidly enforced in the approval of plans for new buildings and for alterations to old ones. If any criticism can be made, it is that the requirements of the law are not strict enough and it might be wise were the Legislature to extend legislation in the direction of requiring greater structural protection against fire. The tendency of the present day is to erect towering office and apartment buildings, known as "sky scrapers," independent of the condition of surrounding properties. While the present law, when drafted, was a stride in advance and was deemed fully competent to deal with such a problem, yet later experience has shown the need of still greater restrictions and requirements.

Electrical Bureau.

Under the efficient management of the new Chief of the Electrical Bureau, the high standard established by his predecessor has been maintained. The most important recommendation by the Bureau is that authority should be given by your Honorable Bodies to the Bureau to supervise the introduction of electricity into business and private houses. At present installations of electrical apparatus are made without supervision or inspection, in many cases by individuals who have had no special training in this important work and in some cases by those who give indifferent attention to the matter. The danger from fire and from, perhaps, fatal accidents, is thus increased. This is a matter that should commend itself to your judgment for legislative action, which I am certain would be favorably received by manufacturers and others owning large establishments.

Frequently during the winter season heavy falls of snow accompanied by freezing rain and sleet caused great destruction to the police and fire wires, and in fact to the telegraph, telephone and electric lighting wires as well. Some years ago your Honorable Bodies made liberal appropriations for the extension of the underground system. This policy should be continued for I deem it of great importance that the wires of the municipality in all the Departments, wherever it is practicable, be placed under ground.

A number of severe storms have occurred in recent years which has placed various Bureaus in the Department to a great disadvantage and serious loss. This is especially applicable to the Bureaus of Police and Fire, where prompt communication should at all times be had.

Bureau of Boiler Inspection.

The Bureau of Boiler Inspection continued during the year 1901 to be self-sustaining, its revenue being nearly double the original appropriation for its maintenance. On December 31st, the Department had under its care more than three thousand boilers, while the combined Insurance Companies had a little more than four thousand. Nearly three thousand engineers were examined upon application for license.

Bureau of City Property.

On July 1st, 1901, in pursuance of an Act of Assembly which abolished the Public Buildings Commission the City Hall came under the jurisdiction of the Bureau of City Property. A thorough reorganization of the force of employees was effected whereby the cost of maintenance has been greatly reduced and greater efficiency attained. The force of watchmen was transferred to the Bureau of Police and organized into what is known as the City Hall Squad, under full police regulations, including trial by a Board of Inquiry prior to discharge.

The Bureau, by Ordinance of Councils, has purchased $160,400 worth of property for patrol, bath, fire and police purposes and has expended nearly $2,000,000 in making permanent improvements.

During the year permanent improvements were completed in a number of squares and small parks throughout the City, thus beautifying and giving breathing spaces to the sections where they are located.

A very handsome and commodious pier was completed and opened at Race street wharf on the Delaware river, last September, and was immediately patronized by many hundreds of people residing along the river front, giving relief to a congested district where small parks are impracticable.

In addition to the recreation pier on the upper deck, the Police and Fire boat crews occupy part of the lower deck of the pier, and the City has leased to the Merchants' and Miners' Transportation Company, running steamers to Savannah, Georgia, the upper side of the pier, thereby bringing the City a handsome revenue which is more than sufficient to pay the interest charges upon the entire improvement.

DEPARTMENT OF PUBLIC WORKS.

During the past year a greater amount of work has been performed upon permanent public improvements by the various Bureaus of the Department of Public Works, than in any one year of our previous history as a city. This is shown in the Annual Report of William C. Haddock, Director of this Department, who has given close and constant attention to all the many details of the various branches of civic improvement. The total amount expended for permanent improvements during the year 1901 was $5,334,844.46.

This work was done under authority of City Councils, and included paving, grading and opening of streets, the removal of rubble and cobble paving and its replacement with improved paving; the building of main and branch sewers; the construction of new bridges; the laying of water mains, together with the installation of the improved water service.

Bureau of Water.

The report of Frank L. Hand, Chief of the Bureau of Water, which incidentally is the one hundredth annual report of the Bureau of Water, shows that improved methods of conducting the business of the Bureau has brought about a large decrease in the former extraordinary consumption of water, in what has heretofore been known as waste. Comparing last year with the first year of the present administration, the decrease was 3,685,710,329 gallons. In the early part of the year 1899 there were about 300,000,000 gallons of water consumed and wasted daily. Through the able administration of Chief Hand this has been brought down to less than 280,000,000 gallons during last year, notwithstanding many thousands of dwellings and other buildings have been added, which would naturally increase the consumption.

The receipts last year were increased $207,483.25, while the current expenses increased only $62,617.64. The latter was due to the increase of force necessary to operate the additional machinery, the cost of labor of laying mains, the higher prices paid for coal and other incidental expenses.

The reduction in the quantity of water consumed does not represent a decrease in the supply to consumers, as there was a higher pressure and greater volume of water than ever heretofore maintained.

The total receipts of the Bureau for last year amounted to $3,331,437.45. The receipts for the past three years amounted to $9,704,586.89. For the previous corresponding period, to wit: 1896, 1897, 1898, $8,916,156.64, showing an increase during the past three years of $788,430.25. The net surplus of receipts over expenditures for the last three years amounts to $2,120,611.22. This covers all expenditures both for permanent improvements as well as the cost of maintenance. During this period very great extensions and additions have been made, new engines, boilers, boiler and engine houses, distributing mains and many other expenditures. It also includes the laying of mains of the Independent High Pressure Fire Service.

The introduction of the system of filtration in this City to furnish purer water in ample quantities to meet all the demands is the greatest public work ever undertaken by any municipality, and when completed Philadelphia will be far in advance of any city in the civilized world. The work has required the highest engineering skill in protecting and safeguarding the City against any loss in constructing and installing a system that will be absolutely practicable in its operations and beneficial in its results. Work at the upper Roxborough and Belmont systems was practically suspended during the winter. At each of these locations, however, the work will be pushed to a rapid completion. When it is considered that in the city of Albany, one of the first to introduce sand filtration, the entire volume of water furnished to that city is about 15,000,000 gallons per day, while at the Upper Roxborough system alone, more than 20,000,000 gallons daily will be supplied to Chestnut Hill, Mt. Airy and Germantown, an idea of the magnitude of the work can be obtained. The time for the completion of the work at Albany was twice the period that will be consumed in the completion of the Roxborough system.

The expert engineers in their report made allowance only for 27,000,000 gallons a day in West Philadelphia, but since their report several thousands buildings have been erected and many thousands have been added to the population, making the consumption of water in West Philadelphia at the present time 30,000,000 daily. The engineers in charge of the filtration work have very wisely made other plans, not only to meet the immediate demands in this territory, but so that when completed the Belmont system will furnish 60,000,000 gallons per day. This will meet every requirement of the City west of the Schuylkill river for practically forty years to come. It was thought by the engineers, not only to be wise but cheaper for the extended work to be done now instead of having to duplicate the system ten to twenty years hence, which would cost as much more for construction.

The expert Commissioners report allowed but for 200,000,000 gallons of filtered water daily to be furnished throughout the entire City, which was only two-thirds of the amount which was being consumed at the time of their report. At each of the systems now under process of construction, the engineers in charge are developing their plans to meet every demand and requirement for thirty to fifty years in the future. The wisdom of this is apparent to every reasoning mind, and in years to come the City will save a great deal of additional money that would then be required to be appropriated.

Never in the history of our City has so important a work confronted the people as that of the filtration of the water. It touches the very health and life of the community, and much greater attention has been given to this important subject than to perhaps all of the other matters of municipal improvements combined. I do not believe but a small percentage of our citizens recognize the stupendous task taken up by the engineers in charge of the work. Its magnitude as well as the beneficial results will only be appreciated by the public when the work is completed and our City will possess the largest, purest and best water system in the civilized world.

The uncompleted part of the contract for laying the fire main service in the central portion of the City which was interrupted about December 1st will be taken up early and soon finished. The $300,000 contained in the Loan Bill for this purpose will be contracted for as soon as your Honorable Bodies direct the authorization of the loan. It is the intention of the Department of Public Works to introduce gas as fuel instead of coal. The estimates made show a great reduction in cost of maintaining the system, both in the cost of fuel as well as labor. When the system is completed and put in service it will prove a most valuable adjunct to the Bureau of Fire in subduing conflagrations, saving from great losses, and a more ample protection to human life.

The reinspection of the entire City which was inaugurated by my direction in May, 1900, was completed in August, 1901. Instead of large salaries for inspectors, there was a corps of men appointed on the per diem roll at $1.75 per day. These men made 248,226 inspections, by means of which 40,418 properties were discovered having appliances for which no water rents were being paid, a great majority of them not having paid any water rent for from ten to twenty years. The total number of delinquent appliances revealed by the inspection was 70,660. The water rent chargeable in these fixtures amounted to $146,057.35 per year, which will hereafter be annually added to the receipts of the Bureau as a permanent income. The total amount during the period of years that the ordinance of City Councils was not enforced and for which the City did not receive one dollar was $2,500,000. The cost of the entire work of reinspection was $26,447.76, showing a net revenue the first year of $119,609.59. Each succeeding year the City will be benefited by the entire gross amount.

Surveys.

The report of Chief Engineer Webster shows that the total expenditures for the year were $1,650,741.84. Of this amount $1,394,309.39 were expended for permanent improvements such as main and branch sewers. Owing to the early distribution of the money by your Honorable Bodies the work last year was begun at an early date and the greater portion of it completed during the year. Chief Webster strongly urges the reconstruction of larger sewers where sewers already exist, there being many places in the City where the sewers are incapable of carrying off the surface water, thereby flooding dwellings, stores and destroying a great deal of property. The authorization by loan of $1,000,000 by this Bureau, will be very well expended in partially relieving some of these conditions.

The enlargement of the testing laboratory in the Bureau has brought forth most beneficial results. Councils appropriated $5,000 for more complete equipment for making tensile, compressive and transverse tests of all kinds of materials, and this has been expended wisely. Testing in connection with the construction of the filters for the improvement, extension and filtration of the water supply has been conducted in this laboratory. The tests are most elaborate and exhaustive on samples of brick, sand, concrete, clay and every material that enters into the construction of municipal work. The report of the chief exhibits very satisfactory results, the character of materials furnished being better than at any previous period.

A number of new bridges, thirteen in all, were ordered constructed during the year. Some of these have been completed, while others are in course of construction.

An appropriation of $250,000 was given by your Honorable Bodies early last summer for dredging the Delaware and Schuylkill rivers. The specifications required that all excavated material should be placed upon League Island Park within impounding banks and above tide water, so there should be no possibility of its again being washed by the tides out into the river and creating shoals. The preliminary work has all been completed. The winter, however, setting in early, interfered with the dredgers' working. As soon as the river is open, this improvement will be vigorously pushed to a completion, and three or four of the most obstructive shoals in the river between Chester and Philadelphia will be removed, thereby giving freer access to commerce and navigation.

Chief Webster recommends legislation to fix a reasonable charge for the examination of books of his Bureau. They become greatly worn and even mutilated by the handling of hundreds of people who exercise no care in the examinations. The examinations are not made by the general public, but are used instead of credit agencies, to ascertain the standing of individuals who desire opening credit accounts with stores. Mr. Webster recommends that a small charge be fixed for examinations just sufficient to pay for the renewal and rewriting of the books, which, at the present time, is a charge upon the municipality without any revenue in return. In this recommendation I most heartily concur.

Highways.

More than one-fifth of the entire amount of improved pavements in the whole city has been laid during the first three years of the present administration. Last year sixty-one miles of improved pavement were laid by the Bureau of Highways. This made a total during the three years of the present administration of 192 miles. The total amount of improved pavement in the City is little more than 839 miles. During the year the Bureau has entered into 558 contracts for paving, repaving, grading and miscellaneous improvements.

Highway Supervisors.

The Board of Highway Supervisors issued 1,468 permits to companies maintaining underground structures, and the report of the Board shows that the outlook for the cessation of the opening of streets under such contracts is very unpromising. The Board says that the only remedy for this condition seems to be in the construction of underground subways within which pipes of all kinds can be placed. The plans made by the draughtsmen of the Board are becoming increasingly valuable, especially in the older sections of the City, as they show at a glance all of the underground structures. This Board is more than self-sustaining, its total revenues during 1901 being $27,722.06, being $16,552.45 in excess of all expenditures.

DEPARTMENT OF CHARITIES AND CORRECTION.

Under the wise and progressive administration of the present directors of the Department of Charities and Correction, many improvements have been started during the year, while the administration of the institutions under their charge has been marked by great care and discretion. The enlargement of the medical staff of the Philadelphia Hospital and the increased facilities afforded for clinical teaching, have already worked much good, while the Children's Hospital, the Maternity Home, and the Hospital for Skin and Venereal Diseases, upon which work has been commenced and is being rapidly pushed, will do much to relieve the crowded condition of the institution as at present constituted. These new buildings are the first of a group to be constructed of the most modern design—an improvement which will make the Philadelphia Hospital a model institution of its kind.

The House of Correction was established thirty years ago as a reformatory for the lessor forms of vice. Thousands of commitments were made, but discharges were easily obtainable through the influence of friends. Instead of the inmates being kept employed, idleness prevailed and it finally became more of an institution for recuperation from drunkenness than for the reformation of vice. With the consent of the directors of this department, I took personal charge of the institution and issued certain instructions and directions to the general superintendent. Men who were known as chronic offenders, and who had served many terms, were placed at the hardest and most laborious work upon the meadow lands, digging ditches and building embankments. Discharges of prisoners became rare, and many of the inmates, finding they were obliged to perform hard labor, were cured of intemperate habits, and the census at the close of the year showed that the population of the institution had decreased for the year between four and five hundred, thus not only effecting a saving in cost to the City, but bringing about a moral regeneration of many who had been heretofore chronic inmates.

The appropriation of $80,000 which has been given by your Honorable Bodies for the erection of a hospital for consumptives will enable the Board to erect a building containing eight wings, of steel and glass, practically germ proof. The roof and sides will work on pivots so that fresh air and sunlight will be admitted in abundance, while ozone will be generated by electrical appliances. There are at present four hundred and thirty-two cases of consumption distributed throughout the hospital, a condition which is a constant menace to the health of every individual inmate. The crowded condition of the wards, the lack of exercise and ventilation, only hastens the process of this dread pulmonary disease. Pavilions for the treatment of this disease have long been required, and the result of separating the consumptives from the other inmates will prove most beneficial. The Board of Directors, in company with a committee of our most eminent medical specialists, visited New York and Boston during the past year and are most earnest in their recommendations for the separation of the insane, sick and indigent. The directors, as well as a committee of physicians, visited and examined various localities for the establishment of departments for the Almshouse proper and for the insane. An appropriation has been made by your Honorable Bodies and doubtless at an early date a site will be recommended and submitted for your consideration for the location of these institutions.

There are many insane patients from this city located in various State asylums. With the erection of a large and modern institution for the insane, much money now appropriated for their maintenance elsewhere will be saved to the city. I cannot too strongly recommend the most prompt action to carry out the recommendations of the Board of Directors of this institution, which appeals to the sympathy and demands the active co-operation of all citizens.

DEPARTMENT OF EDUCATION.

I would respectfully call the attention of your Honorable Bodies to what in my judgment is the most important branch of the public educational system in this city, the manual training schools. There is a call for a wider development of these schools wherein thousands of boys are taught useful and valuable trades. The statistics of the Northeast Manual Training School, for instance, show that the applications from manufacturers and other employers of skilled mechanics, for graduates of this institution, outnumber many times the number of graduating pupils. I am convinced that no branch of the system of public education in Philadelphia does more to open up the future before ambitious boys than do the manual training schools. Recently an appropriation was made for the purchase of a lot in the southern section of the city. The city now owns a tract of ground at Seventh street and Lehigh avenue, which is central, in a manufacturing district, and well adapted for a new manual training school. Funds for the erection of a new building in this neighborhood should be made promptly available. The members of the Board of Education are entirely familiar with this subject and earnestly approve of the extension of this branch of teaching in the public schools. The education of the sons of our citizens to useful trades is of such importance that I hope to see at the close of the present year, new buildings under way at one, if not both, locations.

DEPARTMENT OF LAW.

The Department of Law has at all times rendered the most prompt legal advice whenever called upon, and is entitled to great praise in successfully defending and protecting the city's interests in the various suits brought by or against it.

CITY CONTROLLER.

The City Controller has won the approval of all our citizens for the careful manner in which he has scrutinized the city accounts. The finances of the city are in a highly satisfactory condition and I question whether any city in the world, with a population equal to that of Philadelphia can present any sounder financial standing.

SINKING FUND COMMISSION.

The important trust confided to the Sinking Fund Commission, under which the payment of the city debt is guaranteed, has been given the most scrupulous attention by the Commissioners.

McKINLEY MEMORIAL.

On September 7th, Philadelphia, together with the whole civilized world, was horrified by the news that William McKinley, President of the United States, had been shot by an assassin while on a visit to the Pan-American Exposition at Buffalo, New York. He lingered in agony until Saturday morning, when he expired amidst the unfeigned regret of the people of every nation. In order to give the people of Philadelphia an opportunity to express their esteem and affection for this great and good man, and their sorrow at his untimely taking off, I called at once a meeting of representative citizens, under whose auspices a memorial meeting was held at the Academy of Music on Thursday evening, September 19th. That great building was crowded to the doors, and in the streets without, thousands who had been unable to gain admission, organized impromptu services, at which the favorite hymns of the late President were sung and addresses made.

FREE LIBRARY.

The Free Library of Philadelphia has continued most satisfactorily its work of supplying literature freely to the people. It is to be regretted that the finances of the city did not permit of a more liberal appropriation to its support.

The report of the Secretary of the Civil Service Examining Boards shows that during the last year there were 327 examinations at which appeared 3,711 candidates.

Congress, at its previous session, failed to make an appropriation for dredging the Delaware river and bay. Every assurance is felt that the present Congress will make a continuous appropriation for the completion of the waterway to the Atlantic ocean in securing a channel to the depth of thirty feet. It is also to be hoped that an appropriation will be made for continuing the improvement and enlargement of League Island Navy Yard, it being the only fresh water yard in the country where vessels not in service can be laid up and with greater security and safety than at any other navy yard.

Permit me, in concluding, to express to your Honorable Bodies my deep appreciation of the cordial co-operation you accorded me throughout the year just closed. May the closing year of our relations be mutually pleasant, for it is only through mutual support and active co-operation that the interests of our city can be conserved and promoted.

Very respectfully,
SAMUEL H. ASHBRIDGE,
Mayor.

ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC SAFETY

FOR THE

YEAR ENDING DECEMBER 31, 1901

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OFFICERS

OF THE

DEPARTMENT OF PUBLIC SAFETY

December 31, 1901

Director:
ABRAHAM L. ENGLISH.

SECRETARY—JAMES HOYT.
CHIEF CLERK—HIRAM HORTER, JR.

Chiefs of Bureaus:
POLICE—HARRY M. QUIRK, Superintendent.
FIRE—JAMES C. BAXTER, JR., Chief Engineer.
ELECTRICAL—JOHN C. SAGER.
CITY PROPERTY—GEORGE G. PIERIE.
BUILDING INSPECTION—ROBERT C. HILL.
BOILER INSPECTION—JOHN M. LUKENS.
HEALTH—COL. J. LEWIS GOOD.

MEMBERS OF BOARD OF HEALTH.
COL. J. LEWIS GOOD.
REV. J. GRAY BOLTON, D. D.
BYRON E. WRIGLEY.

FIFTEENTH ANNUAL REPORT

OF THE

DEPARTMENT OF PUBLIC SAFETY

ABRAHAM L. ENGLISH, Director

Philadelphia, January 1, 1902.

Hon. Samuel H. Ashbridge,
Mayor of the City of Philadelphia.

Dear Sir:—In accordance with the Act of Assembly, I herewith transmit a summary of the operations of the Department of Public Safety, together with the reports of the chiefs of the several bureaus embraced therein, for the year ending December 31, 1901.

Bureau of Police.

During the year the total arrests for all offences were 61,189, a decrease of 4,441 from last year. These figures would indicate that the petty, as well as the greater, crimes are decreasing. In fact, it is well understood in the Department that there has been this year less pilfering, pocket-book snatching, and store thievery and sneak thieving, than has been the case for many years, which evidently accounts for the very large percentage of decrease in the number of arrests. The arrests for intoxication and intoxication and disorderly conduct were 29,621, a decrease of 774 from last year. There can be no question that the number of confirmed drunkards and steady drinkers in this city is on the decline. All statistics go to prove this. The licensed saloons are very careful to whom they sell. The speak-easies, which are only conducted on Sundays, are more wary than usual, and if it were not for the large number of chartered clubs, which are conducted for individual profit, and where liquor is sold illegally, in fact, the percentage of decrease in arrests for intoxication would be very much greater. A sister city is trying to solve the problem of illegal Sunday liquor selling with the proposition, which is endorsed by prominent citizens and clergymen, that licensed saloons should be opened at certain hours on Sundays.

The experience of this Department shows that for the best interests of the community at large, it is better that there should be one whole twenty-four hours in each week when liquor cannot be openly and legally purchased. To at least ninety per cent. of the community it means that there should be a day of rest. Many do take advantage of the speakeasies and chartered clubs to obtain what liquor they want, and others lay in supplies at their homes to carry them over until Monday. Despite this, it is the expression and opinion of many dealers in liquors, brewers, tavern keepers and others that the wisest policy is to let the law stand as it is. It is working smoothly, and it is the general impression that if a vote could be had on the subject, the law would not be changed.

There was a decrease in the number of persons accommodated with lodging in station houses of 3,675 from last year, the total being 37,114.

The total value of property recovered was $227,632.49. Of this amount $56,761.35 was recovered by the detective service.

During the year the force was increased as per ordinance of Councils as follows:

Two lieutenants (one in the Thirty-first and one in the Thirty-fourth District), ten detectives, four assistant fire marshals, four street sergeants (two in the Thirty-first and two in the Thirty-fourth District), six house sergeants (three in the Thirty-first and three in the Thirty-fourth District), twelve patrol sergeants (two in the First, two in the Fourth, two in the Sixth, two in the Twenty-eighth, two in the Thirty-first and two in the Thirty-fourth Districts); twenty-four patrolmen to be used in the new patrol service; two pilots; two engineers and four firemen for the tug Samuel H. Ashbridge; two matrons (one in the Thirty-first and one in the Thirty-fourth District) and fifty substitutes distributed as follows: Six in the Seventh, two in the Thirteenth; two in the Sixteenth; five in the Seventeenth; two in the Twenty-first; four in the Twenty-second; two in the Twenty-fourth; two in the Twenty-fifth; six in the Twenty-seventh; four in the Twenty-ninth; four in the Thirty-first; four in the Thirty-second; five in the Thirty-fourth District and two for harbor service.

During the year six patrol wagons were placed in service as follows: First District, located at 717 South Twentieth street on January 21st; Fourth District, located at Second and Race, on February 12th; Sixth District, located at 1036 Winter street, on December 27th; Twenty-eighth District, located at Twentieth above Berks, on January 21st; Thirty-first District, at Twenty-sixth and York streets, on January 21st and the Thirty-fourth District at Fifteenth and Snyder avenue, on January 21st. This makes a total of Thirty-two patrol wagons in service and only two Districts, the Fifth and Eighth, are without this important factor.

There were two new Districts created during the year, the Thirty-first, comprising the Twenty-eighth Ward and the Thirty-fourth District, was made of the Twenty-sixth Ward. In the Thirty-first District a new fire station and patrol house combined went into operation on January 21st, street sergeant Thomas Magee being made its lieutenant. Lieutenant Benjamin Tomlinson was transferred to the Thirty-fourth District and Street Sergeant Charles Black was promoted lieutenant of the Seventeenth District. A modern station house, combining patrol and fire station, was erected at Fifteenth and Snyder avenue and opened on January 21st.

There was one less death during the year 1901, there being a total of thirty, including Lieutenant James B. Robinson, one harbor engineer, one street sergeant and twenty-five patrolmen.

The mounted force still remains in number 152 officers and men. It is in good condition and well equipped and drilled, but could be increased in number to advantage.

The bicycle squad rendered important service without any increase in number, particularly in the prevention of reckless riding and driving.

The system of pool selling has ceased to exist as a method of gambling in this city, although a few places did attempt to start up, but were quickly suppressed. One hundred and sixty arrests were made during the year for writing and selling policy and the writers were so well scattered that the patrons are few and the profits small. For keeping speakeasies 247 arrests were made.

There were not as many houses temporarily vacated during the summer and under the care of the police as usual, the total being 11,642, a decrease of 1,061 from the previous year. Sixty-seven only were entered and the goods taken were valued at $11,183. Of this sum $4,700.50 was recovered and thirty-four thieves arrested, of whom twelve were acquitted or not tried.

There were no strikes of any serious nature, but the number of casualties from fires and explosions was beyond the average. An explosion from gasoline on Locust street above Tenth, on August 5th, resulted in the death of eight persons and injury to thirty others. On August 19th the plant of the Atlantic Refining Company at Point Breeze was struck by lightning, causing three members of the Fire Bureau to lose their lives and besides whom forty persons were injured. This was followed on the 28th of the same month by an explosion of a boiler on the river steamer City of Trenton near Torresdale. In this accident twenty-four persons were killed outright or drowned and thirty-four injured. On November 11th a bursting boiler at Sydenham and Hazzard streets severely injured seven men and women. On the following day an explosion at Ninth and Sansom streets badly burned six. The most distressing accident of all was that caused by the fire at the furniture warerooms of Hunt, Wilkinson and Company, Market street above Twelfth on October 25th, resulting in the death of twenty-two employes of that firm.

It became necessary by reason of the prevalence of smallpox to appoint a number of quarantine guards to assist the regular patrolmen in caring for infected houses. These guards came under the control of this Bureau, and have done good service. In this matter of quarantining houses, in which the labor was arduous, the hours long and tedious and the duty one requiring patience and forbearance, the men have performed the work admirably well, scores of touching letters, giving thanks to the patrolmen and quarantine guards, having been received at this office.

There have been a number of parades during the year, the largest of which was that of the State Firemen, which was handled in good shape. It has been found that the ordinance requiring processsions to stop at certain intervals can be enforced, and has been during the past year, calling forth much commendation from active citizens and travelers.

Captain John Lattimer was promoted to the position of Fire Marshal in March and was succeeded by Dectective James P. Hamm, of the Detective Division.

The naming of a new Fire Marshal together with four active assistants, has been productive of a vast increased amount of labor done. The report of Fire Marshal Lattimer is interesting. It shows that there were 3,049 actual fires which involved a loss in real estate of $600,736 and on personal property, $2,056,363, or a total of $2,657,099. This is a reduction in the losses of 1900 of $809,267. The insurance on the property burned amounted to $37,071,305. The corps made fifteen arrests during the year, of which four were convicted, four are still awaiting trial, four were discharged with a reprimand and four discharged.

Among the work done it was found that twenty-two fire escapes were filled with obstructions and practically useless; 272 inspections were made of combustibles carelessly kept and 306 establishments where benzine, gasoline, etc., were used in manufacturing, together with visits made to theatres, halls, department stores and other buildings. Defective flues, storage of gunpowder and high explosives were promptly looked after and the ordinance of April 2, 1902, enforced. The wisdom of the appointment of this corps is self-evident and it should be continued and increased as the necessity may arise.

The new harbor tug Samuel H. Ashbridge was commissioned during the year and has done good service, and much praise is due to the Philadelphia Medical Emergency Corps for their volunteer service during the year.

It was found necessary to bring thirteen more patrolmen before the Police Court of Inquiry than was the case in 1900, the total number being 452. These cases took in all of the rank from Lieutenant down and 414 were found guilty and 109 acquitted. The fines imposed in days pay amounted to $1,088. The discharges were seventeen less than last year and included: One street sergeant, one house sergeant, fifty-seven patrolmen, ten substitutes, three City Hall guards and one hostler.

In the detective division the force consisted of seventeen regular detectives, one vagrant detective, one court detective, one night detective and six patrolmen detailed for detective service and three clerks. The arrests made numbered 587 and the value of the property restored was $56,761.35.

What is known as the Rogues' Gallery has been increased by 570 photographs and the Bertillon system measurements.

During the year 1,584 persons were reported as missing. Among the more important active service of the division may be mentioned: The murder of Rev. Father Reigel, which resulted in the conviction of two persons of murder of the second degree, and three as accesssories to the crime, the former being sentenced to twenty years each. The credit of this arrest is due to Detectives Hamm and Guyer and Special Ritchie and Officer Ellender of the Eighth Police District.

The abduction of Mabel Goodrich by H. K. Sloan, D. K. Findley, Oscar Dunlap and H. E. Wallace caused considerable excitement, and the accused are now awaiting trial. Detectives Donaghy and McKenty did shrewd work in connection with this case.

Detectives Bond and Murray arrested Harry Smith and George Nicholson for robbing the house of Stephen Berger, 1915 Vine street, of clothing and silverware to the value of $1,500. Most of these goods were recovered and the culprits punished.

Detectives Whitcomb and Miller arrested William E. Douglass for the embezzlement of $13,000, and he was convicted. There were a number of other good pieces of detective work done by the Detective Division.

Chief Meat and Cattle Detective Frank K. Lowry reports that there were inspected during the year 1901, 150,167 cattle on the hoof, 59,741 slaughtered cattle, 6,341 calves on the hoof; 199 cattle were condemned—169 for tuberculosis, 2 for actinomycosis and 28 for other causes; 1,339 monkey calves were condemned. Of the visits made, 6,182 were to slaughter houses, 4,731 to stores and 123 to markets. Three thousand pounds of chickens were condemned in lots from 2 to 25 pounds, and many small lots of meat in small pieces from stores and market houses were condemned.

Twenty complaints were made of the sale of unwholsome foods of various kinds. After investigation fourteen arrests followed. The following cases remain untried:

A. W. McConnell, Coleraine, Pa. Charge, selling tuberculous beef, January 25, 1895.

Jacques Renard, 2306 Columbia avenue, Philadelphia. Charge, selling diseased horse flesh, September 28, 1897.

Louis Fusco, West Collingswood, N. J. Charge, selling hog diseased with cholera, October 18, 1897.

F. Mabrice, 734 South Seventh street, Philadelphia. Charge, selling monkey veal, December 16, 1897.

J. Henry, Boyertown, Bucks county, Pa. Charge, selling tuberculous beef, March 25, 1898.

A. Tariscella, Secane, Delaware county, Pa. Charge, selling putrid sausage, March 8, 1899.

The police force is stronger in personnel and discipline than ever before, and many improvements have been made, and there is no doubt but what the Bureau has increased in the estimation of the general public.

Bureau of Fire.

The Bureau of Fire in 1901 contained an active force of 844 men, 505 of whom were hose and laddermen and the apparatus was increased by one second size Hays hook and ladder truck and four combination hose wagons and chemical engines. The force and the apparatus of this Bureau could be increased very materially, with justice to the needs of the City. There is no money that would be more wisely expended than in increasing the efficiency of the Bureau, and none that would prove to be more satisfactory to the people at large.

The members of the Bureau, from Chief Baxter to the latest recruit, have done their duty faithfully, heroically and with fidelity. They have had some very severe experiences during the year, through which they passed with credit to themselves and honor to the City.

A reference to the tables of the report of the Bureau of Building Inspection will show the enormous growth of the City during the past twelve months, and these figures carry with them the absolute necessity for an enlarged Bureau of Fire. I would recommend that this matter be given serious consideration in the appropriation for 1903, and ask you to make such recommendations to Councils as you deem fit.

Chief Baxter urgently recommends new truck companies to be placed in the vicinity of Broad and Race streets, Broad street and Girard avenue, Forty-ninth and Baltimore avenue and Twentieth and Dauphin streets, and an engine company to be located at Thirty-sixth and Haverford avenue.

There were 3,049 actual fires, of which 334 were extinguished by the chemical service solely. The total number of alarms was 3,191, an increase of 70 over last year.

The fire losses were:

On buildings	$600,736 00
On contents	2,056,363 00
Total	$2,657,099 00

This is a decrease in the losses of $809,267. The insurance on buildings and contents amounted to $37,071,305.

The Repair Shop did good work, repairing all the apparatus for the different bureaus in the Department of Public

Safety, besides building many new wagons, patrol wagons, vans and carriages for the different bureaus.

The Firemen's Pension Fund has increased very nearly fifty thousand dollars during the year, reaching now the sum of $265,708.01. There are 137 persons on the pension roll, who received $41,383.62. This money was divided among: Three Assistant Engineers, ten foremen, two assistant foremen, one tillerman, seven engineers, forty-four hose and laddermen, twenty-five widows, forty children and five dependent parents.

During the year there were seven deaths and three hundred and twenty-five accidents. Of the deaths, James Eels, foreman of Engine Company No. 49; John McCullen, hoseman of the same company, and Frank Davis, ladderman of Truck Company No. 9, were killed by the explosion of oil at the Point Breeze fire on August 20th.

Bureau of Health.

It is very gratifying to me to be able to inform you that the death rate for the year 1901 was the lowest, with one exception, reported in this City since 1879, it being 18.26 per one thousand of population, or one death in each 54.74 living persons. This announcement is eminently satisfactory, inasmuch as the average death rate has recently been about twenty to one thousand of population.

The greatest problem that was presented to the Department of Public Safety during 1901 was the spread of smallpox and the battle made with the dread disease. The history of the introduction of small-pox into this City is highly interesting, and proves conclusively how negligence upon the part of physicians or carelessness upon the part of the people may produce, were it not for favorable conditions and intelligent and scientific work, an epidemic which would bring disaster to the fame and business interests of the City. In the year 1900 twenty-seven cases of small-pox were reported, but they were of a very mild type, and no deaths ensued, and when in December of that year it was found that there was not a known case of the disease in the City, the Department felt reasonably secure as to the future. In January of 1901, however, a case appeared in West Philadelphia; in February another was located in the southern section of the City. Not much thought was given to these cases, but in March one appeared in the northwestern section, the Thirty-seventh Ward, which was really the cause of the present condition of affairs so far as the spread of the disease is concerned. A Philadelphian while on a visit to Altoona stopped at a house where there was small-pox. This gentleman denies that he had any knowledge of this fact, strange as it may seem. When he returned to this City he developed the disease in a mild form and neglected to send for a physician. Following his wife also had a light attack, and still no medical attendance was called in. This had covered a considerable period of time, and during it the family was receiving visitors. When one of the sons sickened the family became alarmed, and a physician was sent for. He diagnosed the case as small-pox, and the later patient was sent to the Municipal Hospital. In spite of isolation and the proper sanitary precautions another son and a daughter-in-law took the disease. These two latter and the first son attacked all died. From that time on smallpox spread all over that section of the City with a rapidity which became alarming. It is probably the best sewered, best paved and one of the cleanliest sections of the City, and there can be no reason assigned for the large number of cases except that the population was not prepared for it by reason of neglect in not having been vaccinated.

While there are some few dissenters scientific men and the ablest physicians are firm in the belief that a recent successful vaccination affords absolute immunity from smallpox. Dr. Wm. M. Welch, physician in charge of the Municipal Hospital, and the highest authority upon that subject, a man who has devoted his life to the treatment and study of contagious diseases, in his report to Chief Good of the Bureau of Health, after reciting many instances of the benefits of vaccination makes this emphatic statement:

"I do not hesitate to say that after a recent successful vaccination the individual can dwell in an atmosphere surcharged with the most virulent variolus poison and breathe and live and eat and sleep there in safety. This is what has happened in every epidemic of smallpox since Jenner taught us how to control the pestilence and is happening to-day in the wards of this hospital. What vaccination is doing for these persons who dwell in the midst of danger it will do for anyone who seeks it."

I believe that it is absolutely necessary for the health of this community that an Act of Assembly should be passed requiring compulsory vaccination and revaccination. The time taken in the operation is so slight and the effects not of so severe a nature as to prevent the transaction of business, that there is no good reason why every individual should not be submitted to vaccination. A public record should be kept of these vaccinations and every person should be required to be revaccinated at each recurring five years or as often as the necessity therefor shall arise. The question of revaccination is a very serious one in the public schools and frequent inspections should be made in order to see that the children are free from the symptoms of disease. A simple statement of fact that not a single case of a recently and successfully vaccinated person has been admitted to the Municipal Hospital suffering with smallpox together with the record of 200 employees, physicians and nurses at the Municipal

Hospital not one has been stricken with it, of course having been vaccinated, are ample and practical proof of the efficacy of vaccination. These instances might be multiplied, but it is not necessary and they would be superfluous.

The spread of the disease has been combated with more than a fair amount of success. Every precaution known to sanitary science, backed by ability and energy has been invoked to keep smallpox well within bounds. A competent corps of vaccine physicians has always been assigned to each district and in addition a special corps was organized and placed under the direction of Assistant Medical Inspector Dr. William M. Angney. Both of these agencies have been supplied with the best quality of virus, care being taken to have it always fresh. They have worked loyally and with persistence and I am happy to say not a single complaint from the citizens has been entered against them. It is probable that they have vaccinated very close on to 500,000 persons up to the first of the year. Dr. Edwin S. Cooke has been in charge of the Disinfection Division with a corps of regular assistants and a corps of temporary assistants organized to disinfect all places where smallpox and other infectious diseases appear. The labors of this division take in the disinfection of public and parochial schools, churches, public buildings, halls, institutions of all kinds, and in fact wherever there may be large assemblages of people. It has been worked hard and has met every demand faithfully and to the satisfaction of the citizens with whom its members came in contact.

The Municipal Hospital has been considerably improved during the year by the enlargement of the main building, installation of a steam heating plant and the erection of barracks for smallpox patients. The annex to the main building is three stories high and contains a number of rooms of good size. These rooms are set aside for patients who wish to be cared for outside of the general wards and for this special accommodation a charge is made. This arrangement has proved to be very satisfactory to those suffering with diphtheria or scarlet fever and one of the advantages is that the patients can furnish their own nurses. The benefit of this is apparent because persons to whom the thought of going to a city hospital is repugnant, readily perceive the advantages when they find they can have private apartments for which they can pay. The other improvements made are equally effective and were sadly needed. Colonel Good, the Chief of the Bureau, recommends that a site for the care and treatment of smallpox patients and patients suffering from diseases like yellow and typhus fever, which are only prevalent at times should be secured. The thought is a good one and demands serious consideration.

During the year there were reported 3,578 cases of diphtheria, a decrease of 1,417 from the previous year. Scarlet fever increased by 943, the total number of cases being 3,756. There was also an increase in the number of typhoid fever cases of 442, the total number being 3,669 up to the first day of January, 1902. There were only nine cases of cerebro-spinal fever reported during the year. Five hundred and twenty-five persons died from diphtheria and 151 from smallpox. Scarlet fever caused the death of 219 persons and typhoid fever 444. Consumption caused 2,946 deaths, which was 449 less than in 1900. The marked decrease in the number of deaths from diphtheria and consumption is believed to be caused in the first place by the use of anti-toxin in the diphtheretic cases and the practice of fumigating in the places where death is caused by consumption. The harmonious relations between the Bureau of Health and the factory inspectors continue and have resulted in a vast amount of good in preventing the sale or distribution of goods made up in houses where infectious or contagious diseases prevail. Care has also been taken of public and private libraries.

Next to the question of disease, if not equal to it in importance, must be placed the production and sale of milk. It is a matter which needs general, broad and comprehensive legislation and when enacted the law should be enforced by skilled, active and energetic men of sufficient numbers. The adulteration of milk is liable to strike at the health of every child in this community and to thousands who are lying upon sick beds. The corps of milk inspectors in this City is ridiculously small and the figures prove the assertion. There were 39,019 quarts of milk condemned on account of adulteration with water and 216 quarts for containing a dangerous preservative known as formaldehyde. The corps did as well as they could, but inspected only 1,433,823 quarts of the 115,000,000 supplied to Philadelphia in the year 1901. The Legislature did pass a law during the last session prohibiting the sale of adulterated milk in cities of the second class, but Philadelphia was overlooked.

As an instance of how much the general public depends upon the nuisance division of the Bureau of Health I would say that the total number of complaints received was 24,102, an increase of 2,276 from the previous year.

The house drainage division was kept busily engaged during the year, approving 3,796 plans for new buildings and 8,158 plans for old buildings, while the number of inspection visits made was 29,357. One hundred and thirty applications were made for plumbers registration, of which 55 were accepted. During the year the number of deaths, not including still and premature births, was 24,137, a decrease of 941 over the previous year.

The number of births was 28,215, a decrease of 890 from the previous year, therefore showing that the birth rate was 21.35 and the death rate was 18.26 in every thousand of population. One hundred and two more people were married than in 1900, the total being 9,912. The population is estimated to be 1,321,408.

The following table shows the death rate, the number of deaths and the population for each of the past seventeen years:

YEAR.	Population.	Deaths.	Deaths to 1000 living persons.	Living Persons to one death.
1885	949,432	21,392	22.3	41.38
1886	971,363	20,005	20.59	48.55
1887	993,801	21,719	21.85	45.76
1888	1,016,758	20,372	20.04	49.90
1889	1,040,243	20,536	19.74	50.65
1890	1,046,964	21,732	20.62	48.18
1891	1,069,264	23,367	21.85	45.75
1892	1,092,168	24,305	22.25	44.98
1893	1,115,562	23,655	21.20	47.15
1894	1,139,457	22,680	19.90	50.24
1895	1,163,864	23,797	20.44	48.90
1896	1,188,797	23,982	20.17	49.57
1897	1,214,256	22,725	18.72	53.40
1898	1,234,266	23,790	19.18	52.13
1899	1,266,832	23,796	18.78	53.23
1900	1,293,697	25,078	19.38	51.59
1901	1,321,408	24,137	18.26	54.74

The Bureau of Health has had a busy and an eventful year. It is worthy of praise, having met every exigency with promptness and intelligence.

Bureau of Building Inspection.

For the year 1900 the report of the Chief of the Bureau of Building Inspection was not an entirely satisfactory one to him. It rather indicated that building operations in the City were at a standstill. It is therefore with some pride that I am able to say that the growth of the City during 1901 was far beyond expectations or predictions, exceeding by $1,250,000 in value that of the highest record of any previous year in the City's history, and going beyond that of the year before nearly $9,000,000, a gain of 42 per cent. It is also gratifying to be able to announce that these improvements are of a most substantial character and have added materially to the taxable wealth of the City. During the year there were 8,717 permits issued, comprising 12,840 operations, the estimated value of which was $29,517,710. Permits were issued for 4,582 dwellings valued at $9,834,350. Compared with the year 1900, this shows an increase of 1,470 in the number and over $2,500,000 in value. About one-third of the entire number of dwellings erected in the City during 1901 were located in the four wards lying west of the Schuylkill river. Nearly one-fifth of the entire amount of building during the year was in the same wards.

The following summary gives the four leading wards, with the estimated value of the dwellings erected:

34th Ward, 2-story dwellings,	842	cost	$1,412,250
34th Ward, 3-story dwellings,	191	cost	618,500
Total	1,033		$2,030,750
33d Ward, 2-story dwellings,	808	cost	$1,397,500
33d Ward, 3-story dwellings,	36	cost	132,100
Total	844		$1,529,600

22d Ward, 2-story dwellings,	249	cost	$453,950
22d Ward, 3-story dwellings,	290	cost	1,062,050
Total	539		$1,516,000
27th Ward, 2-story dwellings,	135	cost	$240,700
27th Ward, 3-story dwellings,	107	cost	508,200
27th Ward, 4-story dwellings,	8	cost	76,500
Total	250		$825,400

The greater amount of money expended in building makes the Eighth Ward the banner ward, the work costing $3,551,005. The Ninth Ward's work was valued at $3,434,340, with the Twenty-seventh Ward expending $2,488,365. The value of mills, store houses, etc., erected exceeded by $1,000,000 that of the highest previous year and was nearly double in amount that of 1900, the total being $4,039,225. Even with this vast amount of building, betterments were continually being proceeded with, there having been expended for alterations and additions nearly $5,000,000. The value of the 25 office buildings erected was $3,140,350, double in value that of any previous year.

Apartment houses are increasng in number and in the amount expended upon them. During the year $1,167,500 were invested in this character of construction, which was three times greater than in any previous year.

The total number of visits made by the inspectors was 46,273, and there were 369 condemnations affecting 425 buildings and 409 condemnations relating to illegal construction in 576 buildings. In conjunction with the fire marshal inspection has been made of the buildings in the territory bounded by Broad street, Delaware avenue, Vine and Walnut streets. The conditions as discovered were not at all satisfactory in the way of caring for the safety of the inmates and the prevention of fire. Reports are being made upon these inspections from time to time, and such action will be taken as the law will permit. The Chief of the Bureau strongly recommends and asks for such legislation as will require all buildings beyond a reasonable height to be built of fire-proof construction. The Act of Assembly of May 5, 1889, Section 50, provides: "Cities of the first-class may, by general ordinance, limit the height of buildings." This matter might be called to the attention of Councils for such legislation as they in their wisdom may provide. There should be a revision of the existing ordinance prescribing the fees for the issuing of permits. The present rate is by no means an equitable one, and the revenue of the Bureau might be considerably increased by its revision.

The division of elevator inspection is well equipped and has been working in the district bounded by Arch and Walnut streets and between the two rivers. 4,647 visits were made by the inspectors and 416 permits issued for the construction of new elevators and 602 permits for repairs. The work of this division has considerably improved the condition of the elevators in the district named, although there is room for further improvement.

The value of the work coming under the care of this division was $1,069,790. On elevators used for passenger service exclusively there were no deaths reported, and but one person seriously injured, while ten persons have been killed and twenty-three seriously injured on freight elevators and in elevator hatchways. Not one of these cases, however, has occurred on a machine that has been approved by the inspectors.

Statement of Permits, Operations and Estimated Cost by Wards for the Year 1901.

Wards.	Permits.	Operations.	Estimated Cost.
First	100	112	$90,935 00
Second	168	172	273,535 00
Third	80	81	53,710 00
Fourth	83	90	25,845 00
Fifth	214	221	1,109,845 00
Sixth	478	489	439,520 00
Seventh	185	187	627,255 00
Eighth	402	426	3,551,005 00
Ninth	409	448	3,434,340 00
Tenth	227	238	1,212,645 00
Eleventh	58	58	52,305 00
Twelfth	61	66	128,350 00
Thirteenth	66	66	87,035 00
Fourteenth	117	122	130,395 00
Fifteenth	249	259	619,095 00
Sixteenth	75	77	128,385 00
Seventeenth	77	77	66,240 00
Eighteenth	123	133	379,500 00
Nineteenth	272	282	425,685 00
Twentieth	206	214	340,695 00
Twenty-first	256	337	486,715 00
Twenty-second	676	1,067	2,144,985 00
Twenty-third	272	366	444,320 00
Twenty-fourth	259	314	478,775 00
Twenty-fifth	350	655	849,595 00
Twenty-sixth	133	199	542,390 00
Twenty-seventh	283	504	2,488,365 00
Twenty-eighth	173	383	424,655 00
Twenty-ninth	295	308	273,475 00
Thirtieth	117	120	136,755 00
Thirty-first	158	162	151,540 00
Thirty-second	146	178	131,745 00
Thirty-third	414	1,166	2,253,585 00

Statement of Permits, Operations, etc.—Continued.

Wards.	Permits.	Operations.	Estimated Cost.
Thirty-fourth	325	1,256	$2,213,580 00
Thirty-fifth	211	243	293,235 00
Thirty-sixth	128	164	300,665 00
Thirty-seventh	127	214	461,810 00
Thirty-eighth	203	424	909,585 00
Thirty-ninth	117	353	583,540 00
Fortieth	242	364	488,905 00
Forty-first	178	215	285,170 00
Totals	8,713	12,849	$29,519,710 00

Electrical Bureau.

Mr. John C. Sager, Chief of the Electrical Bureau, presents his first report as its Chief, he having succeeded Mr. David R. Walker last year. This is the forty-sixth annual report made since the inauguration of the Department. Mr. Sager pays a very just and proper tribute to the forty-five years of service of his predecessor and to his long and honorable term of duty.

The new Chief starts his report with reference to the introduction of a competitive telephone system, which he endorses very highly, and follows with an appeal for greater appropriations in the future. The Chief calls attention to the necessity of placing the electrical service underground to Frankford, Torresdale and Holmesburg, and other localities in the northeast section of the city. He also asks for sufficient money to keep the cable work up to its highest possible attainment, and further speaks fully upon the necessity of an increased appropriation for the improvement and extension of the fire signal service. This latter appeal I endorse most heartily and would go further than the Chief by adding that it might be well if the money was available to place fire signal boxes at the intersection of every main thoroughfare in the city. I cannot conceive how it would be possible to have too many of them.

Another wise recommendation made by the Chief is for a fund sufficient to secure the betterment of the police patrol system. This system is running down and should now be replaced with new and more improved boxes, or else its utility may be seriously impaired.

Referring to the transfer of the City Hall to the Bureau of City Property and the care and maintenance of its electrical installation to the Electrical Bureau, it is reported that a thorough inspection of the building was made, which showed that through carelessness and neglect the fixtures were in such bad shape that at least twenty per cent. of light was lost in almost every room in the building. These have been put in proper repair and are working satisfactorily. In reply to any criticism that may have been expressed regarding the electric lighting contract, the Chief has this to say: "The experience of the Department is such that the award of the contract for the lighting of the highways to but one company, particularly when the award carries with it the lessening of the cost, is from an operative and department point of view commendable, as it simplifies the matter of inspection and details, and narrows the responsibility of its proper working to one common head."

The introduction of the telephone system into the new fire-water main service is technically explained in detail and reference is made to the lack of authority by legislation in this city to supervise the introduction of electrical installation into buildings of whatever description. It is urged that many places are equipped by private installations which are a menace to the properties. If Councils can pass an ordinance authorizing the Electrical Bureau to supervise the introduction of electricity into business and private houses I would respectfully recommend that such a bill be passed. I feel quite sure that it would be a warmly welcomed innovation by manufacturers and business people and those owning large establishments, and would prove, I am sure, very satisfactory to the insurance companies.

During the year there were 35,199 feet of conduit laid, aggregating 361,245 feet of duct, by the Bureau. This was done at the cost of about twenty cents per duct per foot, or $1,062.86 per mile per duct. The rentals of ducts in city conduits to companies and corporations amounted to $8,487.50.

For rental of wires in city cables $1,813.72 was collected. During the year the Bell Telephone Company added to their system of underground conduits 59,807 feet; the Girard Estate 10,701 feet; Union Traction Company 8,243, and the Keystone Telephone Company 305,670 feet; The Edison Electric Light Company also laid 7,222 feet.

The total amount of conduits laid for electrical purposes by the various companies authorized to maintain underground electrical structures, together with those laid by the city, shows 5,045,977 feet of conduit, representing a total of 26,288,119 feet of duct, of which the city owns 376,796 feet of conduit, an increase of 35,199 feet, and 2,803,275 feet of duct, an increase of 361,245 feet.

The Bureau laid during the year 66,780 feet of telegraph and telephone cables, and connecting with the underground system 45 new fire boxes and posts were erected.

At the close of the year 1901 there were erected or authorized to be erected electric lights as follows:

City	**8,939**
Girard Estate	**50**
Free by Electric Light Companies	**91**
Girard Avenue Bridge by Union Traction Co.	**3**
	9,083

This is an increase of 513 lamps erected by the city and one by the electric light companies free. For non-compliance with their contracts 20,079 lamps were deducted from the bills of the Brush Electric Light Company, involving a cost to that corporation of $6,074.01. The electric light companies furnished the police and fire stations a total of 6,629, nearly all of them being free.

Speaking of the City Hall equipment the Chief reports that on New Year's Eve the Hall was lighted by 12,000 incandescent lamps, and adds: "This is the heaviest load the electric light plant has been subjected to in its history, and the fact that not a single break of any kind occurred, speaks well for the efficiency of the plant." In the building the total number of arc lights is 286, and the incandescent lamps 10,932.

Through the police telegraph system 722,597 messages were transmitted over the lines during the year, an increase over 1900 of 38,781.

The police and signal telephone system transmitted 5,820,131 signals, an increase of 45,923. Of this number 5,759,999 were telephone calls, 66,906 reports from private institutions and 60,132 were wagon calls. Of the wagon calls 38,267 were for the conveyance of prisoners and 10,307 for the conveyance of injured persons. There are 679 patrol boxes in use in the city.

The operations of the telephone switchboard were enormous, there having been 1,171,537 calls and connections made and 38,951 messages received and transmitted, an increase of 28,191 connections and a decrease of 2,442 messages. The number of calls for ambulances amounted to 4,993.

The Union Traction Company, during the year, erected 32 trolley poles and removed entirely 134, while they increased the number by the addition of 293 new poles.

The receipts of the Bureau include $59,496, paid by the electric light, telegraph and telephone companies as license charges, a decrease of $3,946 from 1900. The receipts from all sources were $71,252.33, a decrease of $7,233.22 from 1900.

According to the returns made by the telegraph, telephone, electric light and street railway companies, there were overhead on the highways of the city, exclusive of those along railroad tracks:

21,827 wood poles, an increase of 1,978 since 1900.
29,249 iron poles in use by trolley companies, an increase of 103 since 1900.
6,482 City poles, wood, decrease of 70 since 1900.
2,340 City poles, iron, increase of 30 since 1900.
24 Girard Estate, iron.

56,617 an increase of 1,952 since 1900.

There were a number of deaths and serious accidents received by those whose duty it is to maintain electrical appliances.

The Electrical Bureau is well organized and disciplined, and has been ably managed by Mr. Sager since his accession to the position.

Bureau of Boiler Inspection.

Chief Lukens in presenting his annual report to me says that no accidents or explosions by the use of steam have occurred to any boilers directly under the inspection and control of his Bureau during the year. He then continues to say that accidents have occurred at steam plants, at some places through careless handling, which were under the charge of the insurance companies. The Chief calls attention to the number of new boilers erected during the past year. While many of the large manufacturing plants have been reducing the number of boilers by increasing their size and pressure, it has resulted in bringing about economy and safety. During the year 450 new boilers were erected, taking the place of old ones and on the last day of the year the Department had under its care 3,249 boilers, while the insurance companies controlled 4,209, making a total of 7,458. Approvals of boilers were withheld in 35 instances. During the year the Chief ordered repairs and additions to 278 boilers.

The examination of engineers for licenses continues without abatement, there having been 2,944 issued since the start of the license law and others are still making application.

The Bureau still continues to be self-sustaining, earning $26,747.45, while the appropriation was $14,600.

Bureau of City Property.

The Bureau of City Property has increased in importance during the year and is now in charge of the City Hall and under its supervision an enormous amount of municipal work has been done during 1901.

The following properties were purchased during the year:

Tenth and Morgan streets, for patrol	$8,500 00
Eighth and Wallace streets, for bath	15,000 00
Tenth and South streets, for fire	18,000 00
Twentieth and Buttonwood streets, for police	15,000 00
Falls of Schuylkill, for bath	4,900 00
Twentieth and Fitzwater streets, for police	10,500 00
Fiftieth street and Baltimore avenue, for fire	10,500 00
Fifteenth and Parrish streets, for fire	8,000 00
Nineteenth and Oxford streets, for police	25,000 00
Twenty-fifth and Spring Garden streets, for bath ...	18,000 00
Tucker and Pepper streets, for bath	8,000 00
Dawson street and Ridge avenue, for fire	2,000 00
Eleventh street and Girard avenue, for bath	12,000 00
Lot in the Twenty-seventh Ward, for bath	5,000 00
	$160,400 00

The following permanent improvements were completed and started during the year:

Police and patrol station, Sixth District, completed..	$39,199 00
Bath house, Thirteenth Ward, under way	11,500 00
Bath house, Twenty-fifth Ward, completed	7,550 00
Bath house, Twentieth Ward, under way	14,299 00
Police Station, First District, three-fourths completed	33,546 00
Fire house, Twenty-second Ward, under way	28,309 00
Bath house, Thirty-first Ward, completed	7,900 00
Patrol house, Second and Race streets, alterations completed	4,000 00
Fire house, Fifteenth Ward, under way	23,738 00

On July 1, 1901, by virtue of an Act of Assembly, the Public Buildings Commission was abolished and the City Hall placed in charge of this Bureau. A reorganization of the force was effected, placing the watchmen under the command of the Superintendent of Police. This change has proved to be advantageous, better discipline being maintained and the general deportment of the men very much improved.

The Bureau fitted up rooms for the new court No. 5 on the sixth floor, also new rooms for the District Attorney, and an entire suite was inaugurated for the Bureau of Surveys.

The tower elevator is now being completed at a total cost of $30,750. This elevator when completed will be in almost constant use, as the demands for its services are continuous.

At League Island Park over one-third of a million of cubic yards of material have been excavated and distributed west of Broad street. Six acres were leveled off and generally improved for play-ground purposes this spring, and many other minor improvements were made. Hancock square in the Seventeenth Ward was opened to the public giving the City 27 public parks under the control of this Bureau. The list of portraits of the signers of the Declaration of Independence was added to during the year, and it is hoped to complete it in the near future.

The popularity of the public baths continued, there having been 4,889,863 bathers from June 17th to September 28th, the boys furnishing about 3,500,000 of this number, while the girls bathed to the number of 85,000 and women but 19,000.

Chief Pierie again recommends that the market houses on Bainbridge street be removed. They are not only unsightly, but unworthy of the money expended in keeping them in repair. This is a suggestion in which I most heartily concur.

Respectfully submitted,
ABRAHAM L. ENGLISH,
Director.

ANNUAL REPORT

OF THE

ELECTRICAL BUREAU

FOR THE YEAR 1901

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ANNUAL REPORT

OF THE

ELECTRICAL BUREAU

For the Year 1901.

Philadelphia, February 27, 1902.

Abraham L. English, Esq.,
Director Department of Public Safety.

Dear Sir:—The report submitted herewith for your kind consideration embodies the operations of the Electrical Bureau for the year 1901, and also for that portion of the Public Building force, transferred by Act of Assembly to the Department of Public Safety, Electrical Bureau, on July 1st; being the 46th year in the history of the Bureau, and my first as its Chief.

Through the retirement of David R. Walker, Esq., from the Chiefship of this Bureau, local electrical history closes its pages on one, whose forty-five (45) years of faithful and active service entitles him, without a doubt, to the proud distinction of having served the City longer than that of any municipal officer. Almost since its inception, has he, as Constructionist, Assistant Superintendent, Superintendent and Chief been connected with the municipal Electrical Bureau, and it is largely through his instrumentality that the various services under its care have been brought to the degree of perfection at present attained. His knowledge and experience so freely imparted to municipal electrical representatives, in other cities, has without question ably seconded them in their efforts to reach the same degree of perfection as that attained in this City.

To him is accredited the proud distinction of having built a monument, perpetual in character, of the various municipal and private electrical systems at present in vogue in this City. Much could be said to endorse this, but, the electrical conditions existing in this City to-day; the telegraph, telephone, electric light and other services, serve as a fitting monument to his long and honorable tenure of office, as the City's representative and its acknowledged Chief in supervising for the City, the introduction and maintenance of such foreign electrical matters as may, by virtue of ordinance of Councils, have been made necessary.

The successful operation of the multitudinous branches of our municipal government, is closely identified with the proper management of the various electrical services under the control of this Bureau, as these extend to all parts of the municipality, being constantly called into operation, and thus entering into the category of municipal necessities; should interruption occur, vigorous complaints result therefrom.

In a Bureau such as this, the varied services under its care, require and demand a constant and continuous supervision with a view of establishing a perfected degree of efficiency and completeness, obtainable only by a close study of their necessities and an active interest in their successful operation.

The congested condition of the quarters for the clerks of the Bureau, has, in a measure, been abated through the acquisition of a part of the large room formerly occupied by the Bureau of Health, to the north of those in use by this Bureau, half of the room being fitted up for the Chief, whose present quarters will be given over to the clerks, who are so badly in need of more commodious and comfortable quarters.

Historically electric, the year 1901 notes a condition largely interesting to all citizens in the fact of the introduction of a competitive telephone system, competing with that of the Bell, who have been so long paramount; while not actually in operation at this writing, the immense amount of work done by the new competitor to the local company is certainly indicative of a desire on the part of its promotors to compete for the valuable franchise so long enjoyed by them alone.

Competition of this sort naturally redounds to the credit of the City and its citizens, not only in the cheapening of rates, but also in the revenue and privileges derived by ordinance and otherwise.

In keeping with the record of the past years the Bureau has energetically advanced, as far as appropriations would permit, the various services under its care.

As stated in former reports, the system of conduits as laid by the Bureau were largely in excess of those of other branches of the City's electrical services, but I do not consider this should in any manner prevent future appropriations for its further extension.

Owing to its exposed position the electrical services in the northeast section of the City, including Frankford, Torresdale and Holmesburg have frequently been the subject of serious interruptions, due to storms, which practically cut them off from all municipal electrical intercourse with the City Hall. With a view of preparing to overcome this difficulty, State road, along which our overhead trunk lines are carried, has been equipped with an underground conduit from Church street to Ashburner street, opening the way by the possible introduction of cables for the protection of the great electrical artery feeding the territory so frequently interfered with. With funds sufficient to convert into cable for this section for the coming year, much of the anxiety heretofore experienced, on account of the exposed condition of this service, will be overcome.

Many of the highways of the City are equipped either by the means afforded by appropriations to this Bureau, or by ordinance, from corporations, with conduit facilities for municipal purposes, that are not at present in use, owing to a lack of funds for the purchase of cable; were means sufficiently provided for this purpose, many of the overhead wires now subject to the caprice of wind and storm could be placed beneath the surface, where they would be free from interference, and the interruptions to which these most important services are at present subjected.

The necessity for maintaining the appropriations for cable work at the highest amount possible cannot be too strongly urged, as the fire, police and other municipal services depend for their very life on the proper protection from interruption of their circuits, the arteries through which the business of the municipality pulsate. The most desirable position for them is underground, where they will be free from interruption.

The urgency of an appropriation for the improvement of our central office has been so persistently urged as to result in a monetary provision that will to a certain extent relieve the stringency of our telephone switchboard situation, and overcome in a measure the lack of proper facilities for the reception and transmission of alarms of fire over the antiquated instruments at present in use; future appropriations should include means sufficient to cover all up-to-date apparatus necessary for the handling of fire business in a manner consistent with the needs of the day and fitting for the Electrical Bureau of a City like our own.

The necessity for an increased appropriation has been repeatedly urged in these reports for the improvement and extension of the fire signal system, the demand for which becomes more urgent each year, great stress has been laid on the necessity for placing signal stations in hospitals, homes, etc., and having been so urgently presented to Councils, they have set apart a portion of the sum asked for general purposes, to be devoted to this object. While this authorizes the Department to equip a few of these most worthy institutions, it has been done at the expense of the item intended for its extension to localities far remote from existing facilities, and should not be lost sight of when means available present themselves.

I had hoped that a fund sufficient for the betterment of the police patrol system would have been set aside in the appropriation for 1902, but, the sum asked for by the Department was reduced to such an extent as to preclude all thought of replacing the old pattern of box, and so we must content ourselves with the addition of as many stations to the various districts as the limited amount will permit.

The Bureau does not in any part of its estimate for appropriation, ask for more than is absolutely necessary for the maintenance and extension of its various services, and would suggest that where appropriation be lacking, that the reductions be accounted for during the year by such administrative and Councilmanic action as may permit the carrying out of the plans and extensions called for.

Through the transfer of City Hall to your Department on July 1st last, this Bureau assumed, under your direction, the care and maintenance of its electrical installation. Steps were at once taken looking toward the merging of its forces and equipment into that of this Bureau, and a systematic course of inspection and supervision introduced which will eventually result in a more perfect lighting and equipment of the building.

A thorough inspection of the system has been made, the lamps, shades and fixtures throughout the building found to be covered with dust, shades and shade holders were loose, sockets broken and in such bad shape generally that I can safely say at least twenty per cent. (20%) of light was lost in all the rooms. A force of men was immediately started cleaning all fixtures, putting on new sockets, shade holders, etc., and making the repairs necessary for a more perfect system of lighting. After a personal supervision of the work by the Chief Electric Light Inspector, I can state that the fixtures and lamps, including two hundred and eighty-six (286) arc lights and arc light fixtures are in a satisfactory condition.

Accompanying this, all complaints, renewals and repairs in connection with the maintenance of the system were promptly attended to, and the system and plant in general kept in a highly efficient condition.

The illumination of our highways by series arc lamps to the extent permissible out of an appropriation approximating $900,000.00 has been the object of adverse criticism and comment, but, to those of our citizens who of necessity or by choice are on the streets by night, to the timid householder, to the tradesman or laborer and to all whose pleasure or duty require them to frequent the highways during dark hours, the fact remains, that in spite of this criticism and possible individual objection, the City is decidedly the better for the location of the 9083 electric arc lamps as at present located.

It is to be conceded that the highway should be illuminated from some source, and naturally it is argued that in accordance with the brilliancy of the illumination, the less the necessity for increasing the police force. This I feel illustrates the condition of our electric lighting of the highways to-day. Feeling thus, I can but suggest that this, one of the most important of our municipal necessities, should receive the recognition of yourself and our local administrators, in an increased appropriation for its further extension.

As previously expressed, I can but say, that the experience of the Department is such that the award of the contract for the lighting of the highways to but one company, particularly when the award carries with it the lessening of the cost, is, from an operative and departmental point of view commendable, as it simplifies the matter of inspection and details, and narrows the responsibility of its proper working to one common head.

The need of adequate storage facilities for the Bureau has been mentioned before in these reports. The present method of dividing the stores of the Bureau among houses in various portions of the City, is certainly undesirable and inconvenient, as the care and attention necessary for their proper classification and preservation cannot be given them.

Pipe Line.

Owing to the introduction of the "fire water main" service, in what is termed the fire belt, we were called upon to institute in connection therewith a system of electrical communication suitable to its needs. After examining into the few signal systems in use by other cities for a similar purpose, it was decided to work out the requirements in this City on entirely different lines, covering not only the "belt line service," but that of any other made necessary from a municipal standpoint. Calling into consultation two of the Inspectors of the Bureau, the Chief instructed them as to his views, and experimental research on the lines of a system embracing "Central energy" was entered upon. Having determined upon this course an agreement was entered into by the Bureau with the representatives of the telephone company, who were under contract to supply the City with telephones, to set up such experimental apparatus as might be necessary to carry forward our views. As a result of this research it was determined to introduce into an iron shell, similar to those in use in the police patrol system, a combination of circuits, embracing signalling, talking, etc., whose applied energy should eminate from the Electrical Bureau at City Hall. Appreciating the necessity of an official in charge of a fire, being required to have instant and constant communication with the pumping station and his reserve force at the various fire stations, it was so arranged that a call could be made from any or all stations, on the streets, to either the pumping station directly, or the reserve fire force through the Electrical Bureau, or by any official, to any department or official, as may be required, in consummation of this necessity. The system introduced comprises a device to cut all services while the door of the box is closed, introducing the talking and calling services when opened, the whole being dependent entirely on this Bureau for electrical energy, the service as instituted is thus not of necessity confined to the "water and pipe line system," but, may be used to communicate to any point, for any purpose, by any official, carrying the keys necessary to open the box and place it in circuit.

For the protection from excessive currents of all services under the care of this Bureau, an up-to-date system of electrical devices has been collected, comprising the best known methods, these are, and will continue to be introduced, until all districts have been served and are perfectly capable of taking care of the various services passing through them.

An innovation in the messenger call box system has been introduced, through the placing by the American District Telegraph Company of instruments in the office of the Mayor's Secretary and Chief Clerk's rooms, whereby on call to the district office, the telephone may be used as a means of expressing the exact desire of those using the service. As is generally known, this, heretofore has been by signal alone, and very often improperly transmitted, but, with the introduction of the telephone to the service, an intelligent conception of the needs of the subscriber is readily attained and much valuable time saved thereby. Dwelling on this, I have in mind a system of direct verbal communication with the several offices of the district messenger services, whereby the necessities of the use of the system in City Hall may be at once anticipated and achieved.

We are the only large city on this continent which, to my knowledge, is not properly equipped with authority by legislation to supervise the introduction of electrical installations into buildings of whatever description. The necessity for such authority is yearly becoming more urgent; many places are equipped by private installation which stand as a constant menace by fire to themselves and their neighbors, and I would respectfully suggest that efforts be made to establish by ordinance, and legitimatized by Act of Assembly, a branch of your Electrical Bureau to oversee all work of this nature.

In summing up the necessities of the Bureau, I would respectfully direct your attention to the "Operating Department," as it is sorely in need of two additional men; to the force of "Inspectors," who are taxed to satisfactorily cover the field that is yearly enlarging and should have at least two men additional; to the necessity of appropriating sufficient monies for the extension of the system of underground cables; to the need of the fire signal system for its further extension, and introducing it in hospitals, homes, schools, etc.; to the improvement of the Central office machinery, and the equipping of our fire houses and police stations with machinery of modern description; to the securing of suitable quarters for the placing of all supplies handled by the Bureau under one roof; to the needs of the police patrol service by an appropriapriation to disconnect the old instruments located in 1884 and substitute those of a more modern date, and to the establishment by Act of Assembly and by ordinance, of a branch of your Electrical Bureau, covering the inspection of electrical installations of every description in all classes of buildings.

Conduit Laid by the City.

Thirty-five thousand one hundred and ninety-nine (35,199) feet of conduit, aggregating three hundred and sixty-one thousand two hundred and forty-five (361,245) feet of duct was laid by the Bureau during the year.

Twelve (12) duct as follows:

Forty-seven (47) feet across Broad street at Fairmount avenue.

Ten (10) duct as follows:

Seventy-two (72) feet across railroad at Kensington avenue and "C" street.

Fifteen (15) feet between manholes, Kennedy and Tacony streets.

Nine (9) duct as follows:

Twenty-two thousand five hundred and sixty (22,560) feet Tacony street, Church to Ashburner street.

Two thousand three hundred and forty-one (2,341) feet Kensington avenue, Lehigh avenue to Orleans street.

Six (6) duct as follows:

Sixty (60) feet across Broad street at Arch street.

One hundred and fifty (150) feet across Delaware avenue at Race street.

Four (4) duct as follows:

Two thousand eight hundred and four (2,804) feet Germantown avenue, Hunting Park avenue to Tioga street.

One thousand and sixty-one (1,061) feet Church street, Tackawanna to Tacony street.

Five hundred and seventy-two (572) feet Juniper street, Filbert street to South Penn Square.

Five hundred and seventy-two (572) feet West Penn Square, Filbert street to South Penn Square.

Five hundred and eight (508) feet South Penn Square, Juniper street to West Penn Square.

Five hundred and eight feet Filbert street, Juniper street to West Penn Square.

Two hundred and seventy (270) feet Thirteenth street, Vine to Wood street.

One hundred and forty-five (145) feet between Bell and City hole, Gray's Ferry avenue and Washington avenue.

One hundred and forty-two (142) feet across Delaware avenue at Arch street.

One hundred and twenty (120) feet Wood street, Thirteenth street to Morgue.

Six (6) feet Broad and Sansom streets.

Eleven hundred and thirty-three (1,133) feet Gray's Ferry avenue, Bridge to Woodland avenue.

Three (3) duct as follows:

Ninety-two (92) feet north side of Market street, Eleventh street to Inquirer Building.

Fifty (50) feet across Germantown avenue at Nicetown lane, south side.

Twenty-seven (27) feet across Columbia avenue at Park avenue.

Ten (10) feet Cable pole and City hole Broad and Germantown avenue.

Forty (40) feet First District Station House.

One thousand three hundred and two (1,302) feet of single duct conduit was laid for police and fire purposes during the year.

Five hundred and seventeen (517) feet of two duct conduit was laid for police and fire purposes during the year.

Cost of Laying Electrical Conduit during 1901.

The following is the cost per foot and per mile of duct of conduit laid by this Bureau during 1901; including all the necesary details required for placing them in condition to receive cables, viz.: State road, Church to Ashburner street, nine (9) ducts, and Church street, Tackawanna to Tacony street, four (4) ducts, at 20.13 cents per duct per foot, or $1,062.86 per mile per duct.

Germantown avenue, Hunting Park avenue to Tioga street, 33.78 cents per foot per duct, $1,783.58 per duct per mile.

Rental of Ducts in City Conduits.

The Ordinance of April 10, 1893, authorizes the Bureau to lease ducts and wires, in excess of those required by the City for its own use, to such companies or corporations as may be authorized by ordinance to operate and maintain electrical services within the City limits. Under its provisions, ducts in conduits, have been leased to those duly entitled to such privileges, and from this source $8,487.50 has been received and deposited in the City Treasury as follows:

Philadelphia, Reading and Pottsville Telegraph Company:

One (1) duct in City Conduit on the north side of Market street, from first manhole east of Twelfth street to manhole in front of Ridgeway House, east of Water street, a distance of four thousand nine hundred and eighty-four (4,984) feet; also, one (1) duct in City Conduit on Second street, from Market to Berks street, a distance of ten thousand seven hun-

dred and seventy (10,770) feet, a total distance of fifteen thousand seven hundred and fifty-four (15,754) feet, or 2.983 miles......	$750 00
American Telegraph and Telephone Company:	
One (1) duct in City Conduit on east side of Broad street, from the north side of Chestnut street to the south side of Washington avenue, a distance of four thousand eight hundred and seventy (4,870) feet..............	300 00
Pennsylvania Railroad Company:	
One (1) duct in City Conduit on Market street, from Delaware avenue, via Juniper, Filbert and Merrick streets to Fifteenth street; one (1) duct on Fifth street, from Market street to the Bourse Building; one (1) duct on Walnut street, from Front street to No. 8 Walnut street, and one (1) duct on Front street, from Market street to Dock street (Girard Estate leased to the City), in all, one (1) mile and four thousand seven hundred and thirty (4,730) feet......................	550 00
One (1) duct on Filbert street, from Fifteenth to Broad street (Merrick), one hundred and twenty (120) feet; one (1) duct on Market street, from manhole east of Fifteenth to Thirty-second street, one (1) mile and one thousand one hundred and thirty-five (1,135) feet; one (1) duct on Walnut street, from No. 8 across Delaware avenue to the head of the pier, three hundred and fifty-five (355) feet; a total distance of one (1) mile and sixteen hundred and ten (1,610) feet............	400 00
	$950 00

Western Union Telegraph Company:

One (1) duct in City Conduit on Fifth street, from Market to Walnut street, a distance of eleven hundred and thirty-nine (1,139) feet	$300 00
Four (4) ducts in City Conduit on Market street from Water street to east end of bridge, and on Tenth street from Market street to the south of Chestnut street, two (2) miles and fourteen hundred and seventy (1,470) feet each	3,000 00
One (1) duct east end of Market street bridge to Thirtieth street, one thousand one hundred and fifty-one (1,151) feet; one (1) duct on Market street from Thirtieth to Thirty-second street, one thousand four hundred and forty-four (1,444) feet; one duct on Walnut street from Front street to Delaware avenue, two hundred and eighty (280) feet; one (1) duct on Fifth street from Market street to the Bourse, two hundred and eighty-two (282) feet; two (2) ducts on Thirtieth street, from Market street to the south side of Chestnut street, six hundred and thirty-six (636) feet each, making one thousand two hundred and seventy-two feet, a total of four thousand four hundred and twenty-nine (4,429) feet...	300 00
	$3,600 00

Postal Telegraph-Cable Company:

One (1) duct in City Conduit on north side of Market street, from No. 9 Market street, via Juniper, Filbert and Merrick streets to Powelton avenue, a distance of three (3) miles and three thousand seven hundred and sixty-eight (3,768) feet	950 00

One (1) duct in City Conduit on Second street from Market to Diamond street, eleven thousand six hundred and eighty-two (11,682) feet; one (1) duct on Market street from Second to Juniper street, five thousand three hundred and sixty-one (5,361) feet; two (2) ducts on Third street, Market to south of Chestnut street, one thousand two hundred and seventy-two (1,272) feet; one (1) duct on Fifth street, Market street to the Bourse, two hundred and eighty-two (282) feet, in all three (3) miles and two thousand seven hundred and fifty-seven (2,757) feet	$950 00
Four (4) ducts in City Conduit on Juniper street, Market to south of Chestnut street, two thousand seven hundred and sixty-two (2,762) feet; six (6) ducts into building fifty-four (54) feet; one (1) duct on Juniper street from south of Chestnut to Sansom street, one hundred and seventy-eight (178) feet; one (1) duct on Sansom street, Juniper to east side of Broad street two hundred and seventy-one (271) feet; one (1) duct on east side of Broad street, from the northeast corner of Sansom street to southeast corner of Chestnut street, in all three thousand five hundred and thirty-five (3,535) feet	300 00
	$2,200 00

One (1) duct on Juniper street from below Chestnut to Market street, six hundred and ninety (690) feet; one (1) duct on Market street from Juniper street to east of Water street, six thousand six hundred and ninety-six (6,696) feet; one (1) duct on Eighth street, from Market street to Federal street, five thousand two hundred and thirty (5,230) feet, in all two (2) miles and two thousand and fifty-six (2056) feet, from February 1st to December 31, 1901, at seven hundred and fifty (750) dollars per annum.............. 687 50

Rental of Wires in City Cables.

Complying with the provisions of the Ordinance of April 10, 1893, these conductors, in cables, as were not needed for the use of the city were leased to these corporations duly authorized by ordinance, the amount collected and placed in the City Treasury to the credit of the Bureau amounting to $1,813 72

Pennsylvania Railroad Company:

Nine (9) miles of single conductor on Thirteenth street, Chestnut street and Ninth street **$90 00**

Western Union Telegraph Company:

Six (6) Conductors from the Reading Terminal Building along Market and Tenth streets, to the office of the said Western Union Telegraph Company, a distance of one thousand six hundred and fifty (1,650) feet, making in all one (1) mile and four thousand six hundred and twenty (4,620) feet of single conductors or wires **$20 00**

One (1) wire from Western Union Office, Tenth street below Chestnut street, via Tenth and Market streets to manhole in front of Reading Terminal Building, one thousand six hundred and fifty (1,650) feet; one (1) wire on Market street, from City Hall to Front street, six thousand nine hundred and eighty-three (6,983) feet; one (1) wire on Broad street from City Hall to Fairmount avenue, six thousand six hundred and sixty-two (6,662) feet, a total of two (2) miles and four thousand seven hundred and thirty-five (4,735) feet, at thirty (30) dollars per annum 18 47

$38 47

The Atlantic Refining Company:

Six (6) wires along Fifth street, from the Bourse to Market street, thence along Market street to Front street, along Front street to South street, along South street to Broad street, and along Broad street to McKean street, a distance of eighteen thousand nine hundred and fifty-five (18,955) feet, making twenty-two (22) miles and two thousand eight hundred and fifty (2,850) feet of single wire.. $220 00

Philadelphia, Reading & Pottsville Telegraph Company:

Twenty (20) Conductors from the Reading Terminal Building along Market and Tenth streets to the office of the Western Union Telegraph Company, a distance of one thousand six hundred and fifty (1,650) feet, making in all six (6) miles and one thousand three hundred and twenty (1,320) feet of single conductors or wires.................. $70 00

The Mint of the United States:

Two (2) wires from Juniper and Chestnut streets, along Chestnut street to Thirtenth street, along Thirteenth street to Filbert street, along Filbert street to Juniper street, along Juniper street to Cuthbert street, along Cuthbert street to Broad street, along Broad street to Spring Garden street, along Spring Garden street to Seventeenth street, a distance of eight thousand eight hundred and fifty-three (8,853) feet, making three (3) miles and one thousand eight hundred and sixty-six feet (1,866) feet of single conductors or wires.................. $40 00

The United Gas Improvement Company:

Two (2) wires from the northwest corner of Broad and Arch streets to City Hall, thence from City Hall to Broad and Tasker streets, a distance of eleven thousand seven hundred and seventy-eight (11,778) feet, making twenty-three thousand five hundred and fifty-six (23,556) feet; two (2) wires from the northwest corner Broad and Arch streets to City Hall, thence from the City Hall west on Market street to Forty-fourth street, a distance of sixteen thousand two hundred and four (16,204) feet, making thirty-two thousand four hundred and eight (32,408) feet; two wires from the northwest corner Broad and Arch streets to City Hall, thence from City Hall to Broad and McKean streets, a distance of thirteen thousand six hundred and forty-four (13,644) feet, making twenty-seven thousand two hundred and eighty-eight (27,288) feet; two wires from the northwest corner Broad and Arch streets to City Hall, thence west on Market street from City Hall to Twenty-third street and Market street, a distance of six thousand nine hundred and twenty-one (6,921) feet, making thirteen thousand eight hundred and forty-two (13,842) feet; two (2) wires from northwest corner Broad and Arch streets to City Hall, thence west on Market street from City Hall to Thirty-second and Market streets, a distance of nine thousand two hundred and ninety-five (9,295) feet, making eighteen thousand five hundred and ninety (18,590) feet; two (2) wires from the northwest corner Broad and Arch streets to Broad street and Fairmount avenue, thence from Broad and Fairmount avenue to Ridge and Lehigh avenues, a distance of nineteen thousand eight hundred and sixty-one (19,861) feet, making thirty-nine thousand seven hundred and twenty-two (39,722) feet; four (4) wires from the northwest corner Broad and Arch streets to Broad and Columbia avenue, a distance of ten thousand three hundred and sixty-five (10,365) feet, making forty-one thousand four hundred and sixty (41,460) feet; four (4) wires from the northwest corner Broad and Arch streets to Broad and Germantown avenue, a distance of twenty-two thousand one hundred and seven (22,107) feet, making eighty-eight thousand four hundred and twenty-eight (88,428) feet; two (2) wires from the northwest corner Broad and Arch streets to Broad and Diamond streets, a distance of twelve thousand three hundred and sixty-three (12,363) feet, making twenty-four thousand seven hundred and twenty-six (24,726) feet; two (2) wires on Girard avenue from Broad street to Frankford avenue, a distance of seven thousand three hundred and sixty-seven (7,367) feet, making fourteen thousand seven hundred and thirty-four (14,734) feet; two (2) wires from the northwest corner Broad and Arch streets to Broad and Fairmount avenue, then east on Fairmount avenue to Front street, thence north on Front street to Lehigh avenue, a distance of twenty-four thousand and fifty (24,050) feet, making forty-eight thousand one hundred (48,100) feet, a total of seventy (70) miles and three thousand two hundred and fifty-four (3,254) feet.................... $710 00

Two wires from the northwest corner Broad and Arch streets to Broad and Fairmount avenue, thence east on Fairmount avenue to Front street, north on Tenth street, Fairmount avenue to Diamond street, Diamond street, Front to Broad street, thence north on Broad street, Diamond to Germantown avenue, a distance of thirty-six thousand seven hundred and twenty (36,720) feet, making seventy-three thousand four hundred and forty (73,440) feet; two (2) wires from Broad and Diamond street to Front and Diamond streets, a distance of seven thousand one hundred and sixty-nine (7,169) feet, making fourteen thousand three hundred and thirty-eight (14,338) feet; two (2) wires from northwest corner Broad and Arch streets to City Hall, thence to Forty-fourth and Market streets, a distance of sixteen thousand two hundred and four (16,204) feet, making thirty-two thousand four hundred and eight (32,408) feet, a total of twenty-two (22) miles and four thousand and twenty-six (4,026) feet $230 00

Two (2) wires from City Hall to Broad and McKean streets, a distance of twelve thousand two hundred and sixty-six (12,266) feet, making four (4) miles and three thousand four hundred and twelve (3,412) feet.......	50 00
Two (2) wires on Arch street, from west side of Broad to Front street, a distance of seven thousand one hundred and four (7,104) feet, making fourteen thousand two hundred and eight (14,208) feet; two (2) wires Front street from Arch to Amber street, a distance of ten thousand and ninety-six (10,096) feet, making twenty thousand one hundred and ninety-two (20,192) feet; two (2) wires Amber street from Front street to Frankford avenue, three thousand one hundred and fifty-one (3,151) feet, making six thousand three hundred and two (6,302) feet; two (2) wires Frankford avenue from Amber street to Frankford Creek, a distance of twelve thousand two hundred and fifty-four (12,254) feet, making twenty-four thousand five hundred and eight (24,508) feet, making in all twelve (12) miles and one thousand eight hundred and fifty (1,850) feet, from May 20 to December 31, 1901, at one hundred and thirty (130) dollars per annum..	80 02
	$1,070 02

Girard Point Storage Company:

Two (2) wires along Fifth street, from the Bourse to Market street, thence along Market street to Front street, along Front street to South street, along South street to Broad street, and along Broad street to McKean street, a distance of seven (7) miles and nine hundred and fifty (950) feet, from February 1st to December 31, 1901, at an annual rental of $80.00........................... $73 33

American District Telegraph Company:

City Hall to Broad and Fairmount avenue, west side, six thousand six hundred and sixty-two (6662) feet; loop on Callowhill street, west side, Broad to Front street, six thousand five hundred and eighty-eight (6,588) feet, two wires, making thirteen thousand one hundred and seventy-six (13,176) feet; loop into 685 North Broad street, three hundred and fifty (350) feet, two wires. making seven hundred (700) feet; Broad street, east side, from Fairmount avenue to southwest corner Girard avenue, one thousand nine hundred and six (1,906) feet; Broad and Girard avenue to Carlisle street, to Columbia avenue, to Broad, to Diamond street, five thousand six hundred and twenty-seven (5,627) feet; City Hall to Juniper and Cuthbert streets, eight hundred (800) feet, making in all five (5) miles and two thousand four hundred and seventy-one (2,471) feet, at an annual rental of $60.00, from March 1st to December 31, 1901...... $50 00

City Hall to Broad and Fairmount avenue, west side, six thousand six hundred and sixty-two (6,662) feet; loop at Callowhill street, Broad to Twenty-third street, four thousand two hundred and ninety (4,290) feet; two wires, making eight thousand five hundred and eighty (8,580) feet; loop into 685 North Broad street, three hundred and fifty (350) feet, two wires, making seven hundred (700) feet; Broad street, east side, from Fairmount avenue to southwest corner Girard avenue, one thousand nine hundred and six (1,906) feet; Broad and Girard avenue to Carlisle street, to Columbia avenue, to Broad, to Diamond street, five thousand six hundred and twenty-seven (5,627) feet; City Hall to Juniper and Cuthbert street, eight hundred (800) feet; making in all four (4) miles and three thousand one hundred and fifty-five (3,155) feet, from March 1st to December 31, 1901, at an annual rental of $50.00.............. $41.67

North on Broad street, City Hall to Fairmount avenue, six thousand six hundred and sixty-two (6,662) feet; loop from City Hall into U. G. I. Building, one thousand two hundred and three (1,203) feet, two wires, making two thousand four hundred and six (2,406) feet; loop on vine street to Leeds avenue to Engine No. 17, six hundred and seventy-five (675) feet, two wires, making one thousand three hundred and fifty (1,350) feet; loop into 685 North Broad street, three hundred and fifty (350) feet, making seven hundred (700) feet; Ridge avenue, Broad to Twenty-ninth street, nine thousand five hundred and ninety-six (9,596) feet; loop up cable pole Twenty-third and Columbia avenue, one hundred (100) feet, two wires, making two hundred (200) feet; City Hall to Juniper and Cuthbert streets, eight hundred (800) feet, making in all four (4) miles and five hundred and ninety-four (594) feet, from March 1st to December 31, 1901, at $50.00 per annum. 41 67

$133 34

One (1) wire on Ridge avenue, from south side Pennsylvania Railroad bridge to Twenty-ninth street, six hundred and forty-one (641) feet; one (1) wire on Ridge avenue, from south side Pennsylvania Railroad bridge to Lehigh avenue, five thousand four hundred and fifty-one (5,451) feet, making one (1) mile and eight hundred and twelve (812) feet, from April 12th to December 31, 1901, eight (8) months and nineteen (19) days at $20.00 per annum **$14 39**

The United Pneumatic Fire Alarm Telegraph Company:

Two (2) wires on Sixth street, Sansom to Market street, a distance of one thousand (1,000) feet, making two thousand (2,000) feet; two (2) wires on Market street, City Hall to Front street, six thousand nine hundred and twenty-eight (6,928) feet, making thirteen thousand eight hundred and fifty-six (13,856) feet; two (2) wires on Fourth street, Market to Girard avenue, seven thousand four hundred and seventy-seven (7,477) feet, making fourteen thousand nine hundred and fifty-four (14,954) feet; two (2) wires on Girard avenue, Frankford avenue to Broad street, a distance of seven thousand three hundred and sixty-seven (7,367) feet, making fourteen thousand seven hundred and thirty-four (14,734) feet; two (2) wires on Germantown avenue, Girard avenue to Diamond street, a distance of five thousand four hundred and ninety-five (5,495) feet, making ten thousand nine hundred and ninety (10,990) feet, making in all

ten (10) miles and three thousand seven hundred and thirty-four (3,734) feet, from June 1st to December 31, 1901, at $110.00 per annum	$64 17

Conduits Laid by Private Corporations.

The Bell Telephone Company have added to their system of underground conduits fifty-nine thousand eight hundred and seven and three-tenths (59,807.3) feet, as follows:

Oak Lane avenue, from North Eleventh street to York road.

South Tenth street, from Ludlow street to Ranstead street.

Warnock street, from No. 1213 to No. 929.

Marvine street, from No. 1634 to No. 1731.

Filbert street, from manhole east of Preston street to Sloan street.

Sloan street, from Filbert to Warren street.

Warren street, from Sloan street to manhole west of Sloan street.

Warren street, from manhole west of Sloan street to North Fortieth street.

North Fortieth street, from Warren to Mt. Vernon street.

Mt. Vernon street, from North Fortieth street to No. 3966.

Mifflin street, from South Thirteenth street to Camac street.

Camac street, from Mifflin street to No. 1835.

Fernon street, from South Seventh street to No. 630.

Turner street, from No. 2218 to No. 2309.

Marston street, from No. 1539 to No. 1618.

Montgomery avenue, from Ridge avenue to manhole east of Ridge avenue.

Montgomery avenue, from manhole east of Ridge avenue to Ringgold street.

Ringgold street, from Montgomery avenue to No. 1829.

Marvine street, from Thompson street to opposite 1320-22.

Warnock street, from Norris street to opposite No. 1937.

North Sixty-third street, from office manhole to Woodbine avenue.

Woodbine avenue, from North Sixty-third street to North Sixtieth street.

North Sixtieth street, from Woodbine avenue to Drexel avenue, dead end.

Gowen avenue, from Germantown avenue to Ardleigh street.

Devon street, from Gowen avenue to N. P. L. No. 7431.

Sprague street, from Gowen avenue to third manhole south.

Ardleigh street, from manhole north to R. P. L. Gowen avenue.

East Norris street, from Moyer street to west of Girard avenue.

East Norris street, from west of Girard avenue to east of Girard avenue.

East Norris street, from east of Girard avenue to Richmond street.

Webster street, from South Fifteenth street to rear 1426-28 Catharine street.

Bancroft street, from Fitzwater street to No. 716.

Fitzwater street, from Bancroft street to South Seventeenth street.

Carpenter street, from South Seventeenth street to Chadwick street.

Chadwick street, from Carpenter street to No. 1008.

Montrose street, from South Twenty-first street to No. 2038.

Kimball street, from South Twenty-third street to No. 2226.

Reed street, from South Seventeenth street to Colorado street.

Colorado street, from No. 1324 to 1420.

Dickinson street, from South Nineteenth street to Garnet street.

Garnet street, from Dickinson street to rear No. 1912 Dickinson street.

Dickinson street, from South Twenty-first street to Capitol street.

Capitol street, from Dickinson street to rear No. 2026.

Cadwallader street, from Columbia avenue to No. 1622.

Martha street, from Susquehanna avenue to No. 2218.

Cumberland street, from Amber street to Collins street.

Westmoreland street, from Frankford avenue to Emerald street.

Fletcher street, from Emerald street to rear No. 2223 Emerald street.

Wishart street, from Frankford avenue to opposite No. 2048.

Marshall street, from Poplar street to opposite No. 872.

Delaware avenue, from Laurel street to Shackamaxon street.

City Line, from North Fifty-fourth street to manhole west of P. R. R. bridge.

City Line, from manhole west of R. R. bridge to east of P. R. R. bridge.

City Line, from east of railroad bridge to Conshohocken road.

Crefelt street, from Chestnut Hill avenue to manhole west.

South Forty-ninth street, from Pentridge street to Walton street.

South Forty-seventh street, from Cedar avenue east manhole to south of Hazel avenue.

South Forty-fourth street, from Pine to Lombard street.

South Forty-second street, from Locust street to opposite No. 409.

Walton avenue, from R. P. L. No. 627 South Forty-ninth street to South Fiftieth street.

Lombard street, from South Forty-fourth street to opposite rear No. 5035 South Forty-fifth street.

Spruce street, from South Forty-second street to St. Marks Square.

St. Marks Square, from Spruce street to rear No. 4218 Spruce street.

Farson street, from Market street to opposite rear No. 5025 Arch street.

Race street, from North Fifty-second street to rear 200 North Fifty-second.

Wyalusing avenue, from Belmont avenue to rear No. 953.

Cedar avenue, from South Forty-seventh street west manhole to South Forty-seventh street east manhole.

Pacific street, from Bouvier street to west of Nineteenth street.

Carlisle street, from Tioga street to opposite rear Tioga Baptist Church.

Lippincott street, from North Twenty-second street to No. 2133.

Douglass street, from York street to Cumberland street.

Cumberland street, from Douglass street to Spangler street.

Ontario street, from North Seventeenth street to rear 3400 North Seventeenth street.

North Eleventh street, from Oak Lane avenue to R. P. L. Oak Lane avenue.

Pacific street, from North Twenty-second street to manhole east.

Myrtlewood avenue, from York street to Cumberland street.

Mountain street, from South Ninth street to No. 825.

North Second street, from south of Vine street, dead end, to Vine street.

Vine street, from North Second street to Mascher street.

Mascher street, from Vine to Callowhill street.

Preston street, from office manhole to Filbert street.

Preston street, from Filbert street to Powelton avenue.

Washington avenue, from South Seventeenth street to Colorado street.

Colorado street, from Washington avenue to No. 1024-26.

South Twenty-first street, from Garrett street to Dickinson street.

North Ninth street, from Callowhill street to Noble street.

North Twenty-second street, from Ontario street to Atlantic street.

Ranstead street, from South Tenth street to No. 933 Chestnut street.

Ranstead street, from South Tenth street to No. 931 Chestnut street.

Ranstead street, from manhole at No. 1420 to No. 1414 Chestnut street.

Ranstead street, from manhole at No. 1420 to No. 1410 Chestnut street.

Ranstead street, from manhole at No. 1420 to dead end, east curb.

Ranstead street, from manhole east of Fifteenth street to rear No. 1430 South Penn Square.

Indiana avenue, from North Seventeenth street to Pooley Building.

South Second street, from Sansom street to Appraisers' Building.

North Thirty-second street, from north of Chestnut Hill avenue to Samuel Welsh.

New Welsh road, from P. R. R. property to N. N. Frazier.

North Thirty-second street, from north of Chestnut Hill avenue to R. Glenndening.

Broad street, from Glenwood avenue to P. R. R. freight station.

Commerce street, from east of Seventh street to No. 617 Commerce street.

Filbert street, from west of manhole Eighth street to No. 825 Filbert street.

Locust street, from manhole at No. 423 to rear stable No. 423.

Commerce street, from west of Fifth street to No. 509.

Lewis street, from Cable house to river bank.

Chestnut Hill avenue, from North Thirty-second street to Dawson Hoops.

Chestnut Hill avenue, from North Thirty-second street to C. C. English.

Market street, from west of Forty-ninth street to No. 933.

Ranstead street, from east of Fifteenth street to rear of No. 1416-18 South Penn Square.

South Sixth street, from St. James street to northeast corner building.

South Fifth street, south of Walnut street to No. 208.

South Third street, from south of Chestnut street to Mariners' & Merchants' Building.

Sansom street, from west of Ninth street to Racquet Club.

Fifteenth and Wallace streets, from B. T. Co. manhole to U. T. Co. manhole.

North Seventh street, from Oak Lane avenue to Cheltenham avenue.

Washington avenue, from South Nineteenth street to Cleveland avenue.

Cleveland avenue, from Washington avenue to No. 1027 and No. 1029.

Ridge avenue, from Allegheny avenue to Roscoe street.

Ridge avenue, from Roscoe street to west of Wissahickon avenue.

Scott's lane, from Ridge avenue to second manhole north.

School lane, from Ridge avenue to third manhole north.

Stanton lane, from Ridge avenue to No. 132.

Main street, from Green lane to Umbria street.

Main street, from office manhole to Walnut lane.

Umbria street, from Main street to Leverington street.

Leverington street, from Umbria street to south of High street.

Walnut lane, from Main street to Apple street.

Green street, from Main street to dead end.

Shamokin street, from Mascher street to Nos. 120-22.

North Sixty-third street, from Girard avenue to Lansdowne avenue.

Lansdowne avenue, from North Sixty-third street to North Sixty-sixth street.

Lansdowne avenue, from North Sixty-sixth street to North Sixty-seventh street.

Highland avenue, from Lansdowne avenue to Nos. 843-45.

North Sixty-seventh street, from Lansdowne avenue to Leeds street.

South Second street, from Moravian street to St. Albans Hotel.

North Sixth street, from Oak Lane avenue to manhole south.

Willing's alley, from Orianna street to Friend's Almshouse.

The Edison Electric Light Company have added to their system of underground conduits seven thousand two hundred and twenty-two (7,222) feet during the year, as follows:

North side Sansom street, from Subway to West Ninth street.

West side Ninth street, from North Sansom to opposite Jayne street.

Across Ninth street at Jayne street.

East side of Ninth street, between manholes on northeast corner Ninth and Market streets.

East side Ninth street, from north Market to south Arch street.

East side Broad street, from south Spruce street to north Pine street.

North side Pine street, from east Broad street to West Thirteenth street.

West side Thirteenth street, from north Pine street to south Spruce street.

North side Arch street, from east Second street to east Third street.

North side Arch street, from east Third to west Third street.

Across Arch street, in front of No. 122 Arch street.

South side Arch street, from east Second street to No. 122.

East side Mascher street, from south Arch street, alongside of No. 122.

East Second street, from south Arch to north Market street.

East side of Second street, from north Market to south Market street.

East side of Second street, from south Market to north Chestnut street.

North side of Market street, from east Second to west Third street.

South side of Commerce street, from east Fifth street to east Sixth street.

The Girard Estate has added to their system of underground conduits ten thousand seven hundred and one (10,701) feet during the year, as follows:

East side of Delaware avenue, from Vine street to Dock street.

West side of Delaware avenue, from South street to Vine street.

Vine street, from east side of Delaware avenue to Front street.

Market street, from east side of Delaware avenue to Front street.

Front street, from south street to Vine street.

South street, from east side of Delaware aveue to Front street.

The Union Traction Company have added to their system of underground conduits eight thousand two hundred and forty-three and three-tenths (8,243.3) feet during the year, as follows:

Chew street, from Chelten avenue to Stenton avenue.

Fifty-second street across Market street.

Fortieth street, from Haverford avenue to north of Haverford avenue.

Forty-first street, from Haverford avenue to north of Haverford avenue.

Haverford avenue, from Fortieth to Forty-first street.

Market street, from Forty-second to Fifty-second street.

The Keystone Telephone Company have laid three hundred and five thousand six hundred and seventy (305,670) feet of underground conduits during the year, as follows:

Water street, from South to Walnut street, north house line.

Water street, south house line, from Chestnut street northward to Front street.

Swanson street, south house line, from South street to Christian street.

Pine street, from Water street north to Water street south.

South street, from Water street to Swanson street.

Front street, from Water street to Fairmount avenue.

Second street, from Fairmount avenue to Christian street.

Fourth street, from Fairmount avenue to Callowhill street.

Fourth street, from Callowhill street to Market street.

Fourth street, from Market street to Harmony court.

Fourth street, from Harmony court to Walnut street.

Fourth street, from Walnut to Fitzwater street.

Fourth street, from Fitzwater to Christian street.

Sixth street, from Fairmount avenue to Vine street, south house line.

Sixth street, north house line, from Race to Sansom street.

Sixth street, from Sansom to Lombard street.

Sixth street, from Lombard street to Christian street.

Eighth street, from Fairmount avenue to Market street.

Eighth street, from Market street to Spruce street.

Eighth street, from Spruce street to Catharine street.

Eighth street, from Catharine west to Catharine street east.

Eighth street, from Catharine street east to Christian street.

Tenth street, from Fairmount avenue to Callowhill street.

Tenth street, from Callowhill street to Vine street.

Tenth street, from Vine street to Arch street.

Tenth street, from Arch street to Cuthbert street.

Tenth street, from Cuthbert to Market street.

Tenth street, from Market street to Ludlow street, east, C. L. Chance St.

Tenth street, north house line, from Chestnut street to Walnut street.

Tenth street, from Walnut street to Catharine street.

Tenth street, from Catharine street to Christian street.

Eleventh street, from Arch street to Cuthbert street.

Eleventh street, from Cuthbert street to Market street.

Twelfth street, from Fairmount avenue to Vine street.

Twelfth street, from Vine street to Market street.

Twelfth street, from Market street to Lombard street.

Twelfth street, from Lombard street to Christian street.

Juniper street, from Vine street, to Market street.

Juniper street, from Market street to South Penn Square.

Juniper street, from South Penn Square to Catharine street.

South street, from Juniper street north to Juniper street south.

Broad street, from Market street to South Penn Square.

Sixteenth street, from Fairmount avenue to Spring Garden street.

Sixteenth street, from Spring Garden street to Callowhill street.

Sixteenth street, from north side of subway to south side subway (P. & R. R. R.)

Sixteenth street, from Callowhill street to Summer street.

Sixteenth street, from Summer street to Market street.

Sixteenth street, from Market street to Lombard street.

Sixteenth street, from Lombard to Christian street.

Eighteenth street, from Fairmount avenue to Green street.

Eighteenth street, from Green street to Race street.

Eighteenth street, from Race street to Market street.

Eighteenth street, from Market street to Walnut street.

Eighteenth street, from Walnut street to Rittenhouse street east.

Eighteenth street, from Rittenhouse street east to Spruce street.

Eighteenth street, from Spruce to Bainbridge street.

Eighteenth street, from Bainbridge street to Christian street.

Eighteenth street, from south side subway to north side subway.

Twentieth street, from Fairmount avenue to Christian street.

Twentieth street, from south side subway to north side subway.

Twenty-second street, from Fairmount avenue to Christian street.

Fifteenth street, from Vine to Catharine street.

Mount Vernon street, from Percy to Broad street.

Mount Vernon street, from Broad street to Twenty-third street.

Broad street, from Mount Vernon street east to Mount Vernon street west.

Spring Garden street, from Sixth to Twelfth street.

Spring Garden street, from Twelfth to Broad street.

Spring Garden street, from Broad street to Twenty-second street.

Spring Garden street, from Twenty-second to Twenty-fifth street.

Broad street, from Spring Garden street east to Spring Garden street west.

Callowhill street, from Water street to Second street.

Callowhill street, from Second street to Fourth street.

Callowhill street, from Fourth street to Fifth street.

Callowhill street, from Fifth to Seventh street.

Callowhill street, from Seventh to Tenth street.

Callowhill street, from Tenth to Eighteenth street.

Callowhill street, from Eighteenth street to Twenty-second street.

Seventh street, from Callowhill street east to Callowhill street west.

Vine street, from Water street to Second street.

Vine street, from Second to Eighth street.

Vine street, from Eighth street to Tenth street.

Vine street, from Tenth street to Sixteenth street.

Vine street, from Sixteenth street to Eighteenth street.

Vine street, from Eighteenth street to Twentieth street.

Vine street, from Twentieth street to Twenty-fourth street.

Race street, from Water street to Bonsall street.

Arch street, from Water street to Fourth street.

Arch street, from Fourth street to Tenth street.

Arch street, from Tenth street to Eleventh street.

Arch street, from Eleventh street to Twelfth street.

Arch street, from Twelfth street to Sixteenth street.

Arch street, from Sixteenth street to Twentieth street.

Arch street, from Twentieth street to Twenty-third street.

Market street, from Water to Second street.

Market street, from Second street to Third street.

Market street, from Third street to Hudson street (Orianna street.)

Market street, from Orianna street to Fifth street.

Market street, from Fifth street to Seventh street.

Market street, from Seventh street to Ninth street.

Market street, from Ninth street to Tenth street.

Market street, from Tenth street to Eleventh street.

Market street, from Eleventh street to Thirteenth street.

Market street, from Thirteenth street to Juniper street.

Market street, from Broad street to Fifteenth street.

Market street, from Fifteenth street to Schuylkill River bridge.

South Penn square, from Juniper street to Broad street, south.

South Penn square, from Broad street south to Broad street north (Merrick).

Sansom street, from Sixth street to Twenty-fourth street.

Walnut street, from Water street to Second street.

Sansom street, from Second street to American street.

Sansom street, from west side Second street to Exchange Vault east side.

American street, from Sansom street to Dock street.

Dock street, from American street to Third street.

Third street, from Dock street to Harmony street.

Harmony street, from Third street to Fourth street.

Walnut street, from Fourth street to Tenth street.

Walnut street, from Tenth street to Sixteenth street.

Walnut street, from Sixteenth to Twentieth street.

Walnut street, from Twentieth street to Schuylkill River bridge.

Spruce street, from Water street to Twelfth street.

Spruce street, from Twelfth street to Sixteenth street.

Spruce street, from Sixteenth to Twenty-fifth street.

Lombard street, from Water street to Twelfth street.

Lombard street, from Twelfth to Twenty-second street.

Lombard street, from Twenty-second street to Twenty-sixth street.

Bainbridge street, from Swanson street to Second street manhole.

Bainbridge street, from west house line Thirteenth street, to west house line of Broad street.

Bainbridge street, from Sixteenth street to Twenty-second street.

Bainbridge street, from Twenty-second street to Gray's Ferry road.

Bainbridge street, from Gray's Ferry road to Schuylkill avenue.

Catharine street, from Swanson street to Eighth street.

Catharine street, from Eighth street to Tenth street.

Catharine street, from Tenth street to Sixteenth street.

Catharine street, from Sixteenth street to Gray's Ferry road.

Black Horse Alley, from Front to Second street.

Trotters alley, from Second street to Strawberry street.

Ionic street, from Second street, east to 60 feet west of Front street.

American street, from Sansom street to Chestnut street.

Third street, from Dock street to Chestnut street.

Sansom street, from Second street to Front street.

Dock street, from Second street to east of Mattis street.

Dock street, from east of Mattis street to Mattis street.

Mattis street, from Dock street to Spruce street.

Delancy street, from Front street to Third street.

Naudain street, from Second street to Front street.

Gaskill street, from Second street to Third street.

Monroe street, from Second street to Front street.

Monroe street, from Second street to Fourth street.

Queen street, from Front street to Third street.

Ludlow street, from Fourth street to Fifth street.

Ranstead street, from Fourth street to Fifth street.

Sansom street, from Fourth street to Fifth street.

Fifth street, from Library street to Chestnut street.

Willings alley, from Fourth street to Third street.

Locust street, from Fourth street to Fifth street.

Manning street, from Fourth street to Fifth street.

Cypress street, from Fourth street to Third street.

Addison street, from Fourth street, west to end.

Gaskill street, from Fourth street to Fifth street.

South street, from Fourth street to Leithgow street.
Kater street, from Fourth street to Orianna street.
Queen street, from Fourth street to Fifth street.
Ludlow street, from Sixth street to Fifth street.
Ranstead street, from Sixth street to Seventh street.
Letitia street, from Chestnut street to Market street.
Marshall street, from Ranstead street to Market street.
St. James street, from Fifth street to Sixth street.
South Washington square, from Sixth street to Seventh street.
Manning street, from Sixth street east to end.
Ludlow street, from Eighth street east to end.
Ranstead street, from Seventh to Ninth street.
Ionic street, from Eighth street to Seventh street.
Ninth street, from Sansom street to Spruce street.
Darien street, from Walnut street to Locust street.
St. James street, from Eighth street to West Washington square.
DeLancy street, from Eighth street to Seventh street.
Addison street, from Eighth street to Ninth street.
(Chant) Ludlow street, from Tenth street east to end.
Moravian street, from Tenth street to Clifton street.
Warnock street, from Walnut street to Locust street.
Hutchinson street, from Walnut street to Locust street.
Cypress street, from Ninth street to Eleventh street.
Hutchinson street, from Pine street to Lombard street.
Rodman street, from Ninth street to Tenth street.
Clover street, from Twelfth street to Thirteenth street.
Camac street, from Clover street to Ludlow street.
Moravian street, from Twelfth street to Jessup street.
Marvine street, from Walnut to Locust street.
Camac street, from Walnut to Spruce street.
Thirteenth street, from Sansom street to Walnut street.
Latimer street, from Juniper street to Watts street.
Cypress street, from Juniper street to Broad street.

Commerce street, from Juniper street to Twelfth street.

Cuthbert street, from Thirteenth street to Juniper street.

Cuthbert street, from Thirteenth street to Twelfth street.

Thirteenth street, from Cuthbert street east to Cuthbest street west.

Appletree street, from Juniper street to Twelfth street.

Cherry street, from Juniper street to Broad street.

Florist street, from Juniper street to Thirteenth street.

Camac street, from Race street to Cherry street.

Spring street, from Twelfth street to Thirteenth street.

Pearl street, from Broad street to Eleventh street.

Thirteenth street, from Pearl street to Vine street.

Carlton street, from Twelfth street to Broad street.

Winter street, from Tenth street to Eleventh street.

Spring street, from Ninth street to Eleventh street.

Cherry street, from Ninth street to Tenth street.

Hutchinson street, from Race street to Cherry street.

Hutchinson street, from Arch street to Filbert street.

Wood street, from Eighth street to Seventh street.

Summer street, from Eighth street to Darien street.

Mildred street, from Race street to Cherry street.

Cherry street, from Fifth street to Eighth street.

Appletree street, from Eighth street to Perth street.

Ninth street, from Cherry street to Arch street.

Filbert street, from Eighth street to Ninth street.

Filbert street, from Eighth street to Seventh street.

Green street, from Sixth street to Fifth street.

Appletree street, from Sixth street west to end.

Cuthbert street, from Sixth street to Fifth street.

Filbert street, from Sixth street to Seventh street.

Commerce street, from Sixth street to Seventh street.

Commerce street, from Sixth street to Fourth street.

Wallace street, from Fourth street to Fifth street.

Green street, from Fourth street to Third street.

Buttonwood street, from Second street to York avenue.

Noble street, from Third street to York avenue.

Noble street, from Hope street to Third street.

Wood street, from Third street to Fifth street.

New street, from Third street to alley west of Third street.

New street, from alley west of Third to Fourth street.

Florist street, from Third street to alley west of Third street.

Florist street, from alley west of Third street to Fourth street.

Cherry street, from Third street to Fourth street.

Appletree street, from Fourth street to Fifth street.

Green street, from Second street to New Market street.

Nectarine street, from Second street to New Market street.

Pegg street, from Second street to Front street.

Produce street, from Second street to New Market street.

Carlton street, from Second street to New Market street.

Wood street, from Second street to American street.

Wood street, from Second street to New Market street.

New street, from Front street to Broad street.

Florist street, from Second street to Front street.

Florist street, from Second street west to end.

Quarry street, from Second street to Third street.

Cherry street, from Second street to Front street.

Cuthbert street, from Front street to American street.

Church street, from Front street to Third street.

Bank street, from Chestnut street to Market street.

Elbow lane, from Bank street to Bodine street.

Hancock street, from Walnut street to Sansom street.

Leithgow street, from Walnut street to McCauley's court.

Waverly street, from Thirteenth street to Juniper street.

Panama street, from Juniper to Clarion street.

Cuthbert street, from Eleventh street eastward.

Market street, from manhole on Market street to manhole on Ninth street north of Market street.

Ninth street, from manhole north of Market street southward.

Orianna street, from Market street to Harmony street.

Cuthbert street, from east of Twentieth street to west of Twentieth street.

Appletree street, from Twentieth street to east of Twenty-first street.

Pearl street, from Uber street to east of Twenty-first street.

Carlton street, from Uber street to east of Twenty-first street.

Hamilton street, from Opal street to Twentieth street.

Nectarine street, from Twentieth street to west of Nineteenth street.

Monterey street, from Twentieth street to west of Nineteenth street.

Wilcox street, from Twentieth street to west of Nineteenth street.

Brandywine street, from Twentieth street to west of Twentieth street.

North street, from west of Nineteenth street to east of Twenty-first street.

Total Amount of Conduits Laid for Electrical Purposes.

The returns made to this Bureau by the various companies authorized by Councils to maintain underground electrical structures, together with those laid by the City, shows there has been placed underground five million forty-five thousand nine hundred and seventy-seven

(5,045,977) feet of conduit, representing a total of twenty-six million two hundred and eighty-eight thousand one hundred and nineteen (26,288,119) feet of duct, of which the City owns three hundred and seventy-six thousand seven hundred and ninety-six (376,796) feet of conduit, an increase of thirty-five thousand one hundred and ninety-nine (35,199) feet, and two million eight hundred and three thousand two hundred and seventy-five (2,803,275) feet of duct, an increase of three hundred and sixty-one thousand two hundred and forty-five (361,245) feet.

Telegraph and Telephone Cables Laid by this Bureau.

Sixty-six thousand seven hundred and eighty (66,780) feet of telegraph and telephone cable were laid by the Bureau during the year as follows:

Nine thousand three hundred and five (9,305) feet of 50 conductor on Woodland avenue, from Market street to Forty-ninth street.

Thirteen thousand four hundred and sixty-seven (13,467) feet of 43 conductor on Germantown avenue from Engine No. 30 to Chelton avenue.

One hundred and forty-three (143) feet of 43 conductor Eleventh District Police Station.

One hundred and sixty (160) feet of 43 conductor Twenty-first District Police Station.

Sixty (60) feet of 43 conductor, Twenty-first District Police Station.

One hundred and thirty-three (133) feet of 42 conductor, Sixteenth District Police Station.

Eighty-one (81) feet of 42 conductor, between City holes Broad and Lehigh avenue.

Four thousand six hundred and sixty-six (4,666) feet of 40 conductor, Lancaster avenue, from Market street to Thirty-ninth street.

Four thousand one hundred and sixty-one (4,161) feet of 40 conductor, Girard avenue, from Frankford avenue to Norris street.

Two hundred and sixty-eight (268) feet of 36 conductor, Race street, northeast corner Broad to Juniper street.

Seventy-five (75) feet of 32 conductor, Eleventh District Police Station.

Thirty-four (34) feet of 28 conductor, between City holes, southwest corner Broad and Girard avenue.

Forty-five (45) feet of 28 conductor, between City and Bell hole, Lehigh avenue and Richmond street.

Sixty-five (65) feet of 25 conductor, between City and Bell hole, Lehigh avenue and Frankford avenue.

Sixty-five (65) feet of 25 conductor, between City and Bell hole, Lehigh avenue and Germantown avenue.

One hundred and sixty (160) feet of 25 conductor, Cable pole, Falls, south side.

Thirty-six (36) feet of 25 conductor, Thirty-fourth District Police Station.

Sixty (60) feet of 25 conductor, Sixteenth District Police Station.

Three thousand eight hundred and ninety-seven (3,897) feet of 25 conductor, Thirty-third street, Columbia avenue to Ridge avenue.

Two thousand nine hundred and twelve (2,912) feet of 25 conductor, Columbia avenue, from Twenty-seventh to Thirty-third street.

One hundred and twenty (120) feet of 26 conductor, between City holes, southwest to northeast corner Broad and Race streets.

One hundred and fifty-five (155) feet of 21 conductor, Cable pole, Frankford and Allegheny avenues.

Four thousand eight hundred and forty-four (4,844) feet of 22 conductor, Norris street, from Front to Richmond street.

Twenty-five (25) feet of 18 conductor, Twenty-first District Police Station.

Seven hundred and ten (710) feet of 16 conductor, Race street pier.

Three hundred and (330) feet of 16 conductor, Race street, Front to Delaware avenue.

One hundred and eighty (180) feet of 16 conductor, Broad street, east side of Fairmount avenue to Ridge avenue.

Twenty-five (25) feet of 16 conductor, Survey Office, City Hall.

Five hundred and two (502) feet of 16 conductor, Cambria street, from Broad street to Engine 50.

Three hundred and fifty-seven (357) feet of 16 conductor, Eighth street, Callowhill street to Wood street.

One hundred and fifty (150) feet of 16 conductor, First District Police Station.

One hundred and seventy-five (175) feet of 16 conductor, Sixth District Police Station.

Forty (40) feet of 16 conductor, Sixteenth District Police Station.

Forty-five (45) feet of 16 conductor, Thirty-fourth District Police Station.

Sixty-five (65) feet of 16 conductor, Cable pole, Second street and Lehigh avenue.

One hundred (100) feet of 16 conductor, Cable pole, Richmond and East Columbia avenue.

Thirty-five (35) feet of 16 conductor, between City and L. D. manholes, Broad and Columbia avenue.

Seventy-three (73) feet of 16 conductor, between City and L. D. holes, Ridge avenue and P. R. R.

Eight hundred and sixty (860) feet of 10 conductor, Front and Brown streets to Engine 21, via Brown and New Market streets.

Three hundred and ten (310) feet of 10 conductor, Palmer street, Richmond to Beach street.

One hundred and ninety (190) feet of 10 conductor, Clearfield street, Frankford avenue into Truck 10.

One hundred and sixty-five (165) feet of 10 conductor, Thirteenth street, Spring Garden to Nectarine street.

Six hundred and fifty (650) feet of 10 conductor, Thirteenth street, Nectarine to Buttonwood street, east of Broad street.

One thousand four hundred and eighty (1,480) feet of 10 conductor, Poplar street, Twelfth to Ninth street.

Seven hundred and eighty (780) feet of 10 conductor, Oxford street, Broad to Camac street.

Three hundred and ten (310) feet of 10 conductor, Thompson street, west side, Broad to Watts street.

Four hundred and twenty-five (425) feet of 10 conductor, tower of Engine 2 to manhole Tenth and Berks streets.

One hundred and twenty-five (125) feet of 10 condoctor, Engine No. 9.

Seventy-eight (78) feet of 10 conductor, between Twenty-seventh District and No. 38 Engine.

Three hundred (300) feet of 10 conductor, new mint.

Three hundred and fifty (350) feet of 10 conductor, Broad and Fairmount avenue to 685 North Broad street.

Thirty-eight (38) feet of 10 conductor, clock tower, Bridesburg.

One hundred and fifty (150) feet of 10 conductor, First District Police Station.

One hundred and thirty (130) feet of 10 conductor, Thirty-fourth District Police Station.

One hundred (100) feet of 10 conductor, Cable pole, Fifth and Lehigh avenue.

One hundred and ten (110) feet of 10 conductor, Cable pole, Broad and Clearfield streets.

Sixty-five (65) feet of 10 conductor, Cable pole, Cedar and Lehigh avenue.

Seventy (70) feet of 10 conductor, Cable pole, Eighth and Lehigh avenue.

Seventy-five (75) feet of 10 conductor, Cable pole, Kensington avenue and Lehigh avenue.

Sixty (60) feet of 10 conductor, Cable pole, Richmond street and Lehigh avenue.

Twenty-five (25) feet of 10 conductor, between City and Bell holes, Carlisle and Columbia avenue.

Seventy (70) feet of 10 conductor, fire main box, Water and Race streets.

Forty (40) feet of 10 conductor, fire main box, Water and Walnut streets.

Fifty-five (55) feet of 10 conductor, fire main box, Front and Market streets.

One hundred (100) feet of 10 conductor, fire main box, Second and Market streets.

Fifty-five (55) feet of 10 conductor, fire main box, Front and Arch streets.

Twenty (20) feet of 10 conductor, fire main box, Second and Race streets.

One hundred and five (105) feet of 10 conductor, fire main box, Third and Race streets.

Seventy-five (75) feet of 10 conductor, fire main box, Second and Arch streets.

Twenty-five (25) feet of 10 conductor, patrol box, Race street pier.

Sixty-five (65) feet of 10 conductor, fire main box, Third and Arch streets.

One hundred (100) feet of 10 conductor, fire main box, Third and Market streets.

One hundred and fifty (150) feet of 10 conductor, fire main box, Fourth and Market streets.

Eighty-five (85) feet of 10 conductor, fire main box, Seventh and Walnut streets.

Sixty-five (65) feet of 10 conductor, fire main box, Sixth and Market streets.

One hundred and seventy-five (175) feet of 10 conductor, fire main box, Fifth and Market streets.

Seventy-five (75) feet of 10 conductor, fire main box, Second and Walnut streets.

Sixty-five (65) feet of 10 conductor, fire main box, Third and Walnut streets.

Forty-five (45) feet of 10 conductor, fire main box, Fifth and Walnut streets.

Seventy-five (75) feet of 10 conductor, fire main box, Fourth and Walnut streets.

Seventy (70) feet of 10 conductor, fire main box, Sixth and Walnut streets.

Fifty (50) feet of 10 conductor, fire main box, Eighth and Walnut streets.

Fifty (50) feet of 10 conductor, fire main box, Thirteenth and Market streets.

Fifty (50) feet of 10 conductor, fire main box, Twelfth and Market streets.

Fifty (50) feet of 10 conductor, fire main box, Eleventh and Market streets.

Fifty (50) feet of 10 conductor, fire main box, Ninth and Market streets.

Seventy-five (75) feet of 10 conductor, fire main box, Eighth and Market streets.

Eighty (80) feet of 10 conductor, Falls, south side, to Engine No. 35.

Ninety-five (95) feet of 10 conductor, Cable pole, Frankford avenue above Luzerne street.

One hundred (100) feet of 10 conductor, Cable pole, Richmond street and Frankford avenue.

Thirty-four (34) feet of 13 conductor, between City and L. D. holes, corner Broad and Race streets.

Four thousand and ninety-nine (4,099) feet of 4 conductor cable were used in connecting police patrol boxes, station and engine houses with the patrol and fire telephone service.

Four thousand eight hundred and sixty-eight (4,868) feet of 2 conductor cable were used in connecting police patrol station and engine houses with the patrol and fire telephone service.

Signal circuits numbered three (3) and nine (9) were made entirely underground during the year.

Underground Service Introduced for Private Corporations Connected with City Cables.

Five hundred (500) feet of 4 conductor cable connected at the expense of the United States Arsenal at Frankford.

One hundred and thirty-five (135) feet of 4 conductor cable used in transferring Southwestern National Bank (private) from old to new quarters.

Fire and patrol boxes in the new mint extended and equipped for service.

Six hundred and fifty (650) feet of 10 conductor, 6 No. 16, 4 No. 18, from Thirteenth and Nectarine streets to Broad and Buttonwood streets, at the expense of Hoopes & Townsend Company.

Pipe Line.

One thousand eight hundred and ten (1,810) feet of 10 conductor cable were used to introduce pipe line telephone system.

Circuits Partly Underground.

No. 18 signal was made underground from Eighth Police District to Tenth and Diamond streets, and on Lehigh avenue, from Fifth to the Twenty-second Police District.

The northeast police wire was extended to Frankford road and Allegheny avenue.

To protect the various services extending to the police tug Stokley at Penn Treaty wharf, No. 1 alarm, No. 4 fire telephone, and the talking circuit was carried to Richmond and Columbia avenue, underground.

The old south police line was divided, creating the south-east police line.

Repairs to Fire Posts and Shells.

One hundred and forty (140) feet of 2 conductor cable was used to replace damage done to ten (10) broken fire signal box posts.

Fire Posts and Shells Erected.

Forty-five (45) new fire boxes and posts were erected during the year on the underground system.

Cable Work in City Hall.

Three (3) floor boxes were used in laying three hundred and twenty-seven (327) feet of 4 conductor cable on the ninth floor.

Twenty-five (25) feet of 16 conductor cable was used between rooms No. 412 and No. 512.

One hundred and sixteen (116) feet of 4 conductor cable used between rooms No. 781 and 787.

Floor boxes were placed in rooms 153, 252, 652, 654, 661.

Six hundred and fifty-seven (657) feet of 4 conductor cable laid in rooms 662, 664, 666.

One hundred and seventy (170) feet of 4 conductor cable laid in room 648.

One hundred and eighty-seven (187) feet of 4 conductor cable laid in room 654.

One hundred and thirty (130) feet of 26 conductor cable laid in dynamo room.

A total of....... 1457 ft. 4 conductor.
25 ft. 16 conductor.
130 ft. 26 conductor
cable used in City Hall.

Seven patrol boxes were erected on the underground service during the year.

Cable Terminal Poles were Erected as follows:

Fifth and Lehigh avenue.

Broad and Clearfield streets.

Cedar street and Lehigh avenue.

Frankford avenue and Richmond street.

Eighth street and Lehigh avenue.

Twenty-second District Sub-Station.

Frankford avenue, above Luzerne street.

Kensington avenue and Lehigh avenue.

Richmond street and Lehigh avenue.

Richmond street and East Columbia avenue.

Second street and Lehigh avenue.

Allegheny avenue, east of Frankford avenue.

Twenty-first District Station House, Thirty-seventh and Woodland avenue.

First District Police Station, Twentieth and Fitzwater streets.

Sixth District Police Station, Eleventh and Sergeant streets.

Eleventh District Police Station, Girard avenue and Vienna street.

Fourteenth District Police Station.

Thirty-fourth District Police Station, Fifteenth and Snyder avenue.

Slate terminals were used in the installations of the Sixth, Sixteenth, Twenty-first and Thirty-fourth Districts.

Defective slate at the Thirty-first District was replaced at the expense of the contractors.

One hundred and seventy-six (176) newly connected junction boxes were introduced in the telegraph and telephone cable system during the year.

Electric Light, Single Conductor, Cables were Laid Underground by the Bureau as follows:

Five thousand (5,000) feet 4 B. & S. gauge, Race street pier.

One thousand three hundred (1,300) feet 4 B. & S. gauge, the Morgue.

Three hundred (300) feet 4 B. & S. gauge, First District.

Two hundred and fifty-five (255) feet 4 B. & S. gauge, No. 9 engine.

Three thousand five hundred and thirty-seven (3,537) feet 4 B. & S. gauge, City Hall.

Six hundred and ninety (690) feet 4 B. & S. gauge, Park avenue north from Columbia avenue.

Four hundred and ninety (490) feet 4 B. & S. gauge, Dickinson Square.

One hundred and eighty-two (182) feet 4 B. & S. gauge, Truck 10.

Electric Light Cable Used for Repairs.

Three thousand four hundred and fifty-five (3,455) feet of electric light cable were used in making repairs.

Iron Poles Erected.

Underground on City Cables 30 Feet Poles.

Twelve (12) around City Hall.

One (1) 1723 Park avenue, 15 foot arm.

One (1) southeast corner Lawrence and Lehigh avenue, 15 foot arm.

One (1) 2617 Christian street, 15 foot arm.

Four (4) John Dickinson Square.

Overhead.

One (1) Fortieth and Baltimore avenue, 15 foot arm.

One (1) St. Marks Square and Locust street, 15 foot arm.

One (1) Fifteenth and Ridge avenue, 15 foot arm.

One (1) Rising Sun lane and Westmoreland street, 15 foot arm.

One (1) 1614 North Eighteenth street, 12 foot arm.
One (1) 2235 North Nineteenth street.
One (1) 2332 North Thirteenth street.

25 Feet Poles.

One (1) northwest corner Twelfth and Seybert streets.
One (1) northeast corner Sixteenth and Tucker streets.
One (1) 1525 North Twelfth street.
One (1) 1431 North Eleventh street.

Renewed.

One (1) west side Lawrence street, north of Brown street.
One (1) No. 1324 Green street.

Conduit and Cable Extensions by Girard Estate.

In keeping with that portion of the will of Stephen Girard relating to the policing and lighting of the old city proper, and a desire on the part of the Trustees to comply with its provisions, the question of properly lighting the eastern or river front section has in the past two years received the consideration that so serious a subject naturally requires, after the plans submitted by them were approved and passed by the City authorities, conduits and cables were laid to all buildings controlled by the Trust east of Fifth street, and to such of the streets as had heretofore been lighted by them under private contract, the results will shortly demonstrate themselves, when all buildings controlled by the Girard Trust, east of Fifth street, and the highways represented by Delaware avenue and Front street, between Vine and South streets, will be lighted from their own plant at Harmony and Hudson streets; this condition of affairs is subject to expansion, and the lighting of the streets in the old city proper permit of the transfer of lamps now cared for by ordinances to other sections where they are badly needed:

East side of Delaware avenue, from Vine street to Dock street.

West side of Delaware avenue, from South street to Vine street.

Vine street, from east side of Delaware avenue to Front street.

Market street, from east side of Delaware avenue to Front street.

Front street, from South street to Vine street.

South street, from east side of Delaware avenue to Front street.

The new recreation pier at the foot of Race street, Delaware river, was equipped with seventeen (17) lamps, which started to burn September 5th.

Electric Lighting of the City's Highways.

At the close of the year there were erected, or authorized to be erected, on the highways of the City, electric lights numerated as follows:

	Electric arc lights.	Increase over 1900.
City	8,939	513
Girard Estate	50	
Free under Ordinance from Electric Light Companies	91	1
Girard Avenue Bridge by Union Traction Company	3	
Total	9,083	

Included in the above the following electric arc lamps were supplied with current by underground cables:

City Cables	818
Girard Estate Cables	24
Cables furnished by Electric Light Companies under contract	304

Lamps Deducted for Non-Compliance with Contracts.

There were twenty thousand and seventy-nine (20,079) lamps deducted from the bills of the contracting (Brush Electric Light) Company during the year, where the lamps failed to burn to the limit of the specified requirements.

Six thousand seventy-four and 01/100 (6,074.01) dollars remained in the treasury as follows:

Number of Arc Lights Deducted from Bills During 1901.

	Number of lights.	Amount.
January	2,463	**$744 62**
February	2,258	**682 41**
March	1,915	**579 08**
April	1,378	**416 59**
May	1,312	**396 72**
June	1,002	**302 84**
July	1,479	**448 79**
August	1,434	**434 41**
September	1,675	**506 36**
October	1,637	**494 43**
November	1,840	**556 91**
December	1,686	**510 85**
Total	20,079	**$6,074 01**

An enumeration of the installations of incandescent lights in police, fire and police patrol stations and stables, together with the number of lamps, and by whom furnished, is herewith depicted. It is noted that all service is free, except that marked "Paid," this, in the territory bounded by Vine and South streets, supplied with current by the Brush and United States Electric Lighting Companies, whose ordinances, early enacted, were granted without the requirements embodied in those of later date.

First District Station, 110 lights by Southern E. L & P. Co.
Second District Station, 106 lights by Southern E. L. & P. Co.
Fifth District Station, 126 lights paid, by Edison E. L. Co.
Seventh District Station, 95 lights by Northern E. L. & P. Co.
Tenth District Station, 122 lights by Northern E. L. & P. Co.

Eleventh District Station, 114 lights by Northern E. L. & P. Co.
Twelfth District Station, 67 lights by Northern E. L. & P. Co.
Fourteenth District Station, 83 lights by Germantown E. L. Co.
Fourteenth District Station, Sub C. H., 58 lights by Germantown E. L. Co.
Fifteenth District Station, 85 lights, by Suburban E. L. Co.
Sixteenth District Station, 123 lights by Powelton E. L. Co.
Seventeenth District Station, 118 lights by Southern E. L. & P. Co.
Eighteenth District Station, 111 lights by Manufacturers' E. L. Co.
Twentieth District Station, 143 lights paid, by Edison E. L. Co.
Twenty-first District Station, 93 lights by Powelton E. L. Co.
Twenty-second District Station, 83 lights by Manufacturers' E. L. Co.
Twenty-third District Station, 80 lights by West End E. L. Co.
Twenty-fourth District Station, 65 lights by Manufacturers' E. L. Co.
Twenty-fifth District Station, 78 lights by Southern E. L. & P. Co.
Twenty-fifth District Sub-Station, 51 lights by Southern E. L. & P. Co.
Twenty-sixth District Station, 132 lights, Kensington E. Co.
Twenty-seventh District Station, 96 lights by Suburban E. Co.
Twenty-seventh District Sub-Station, Holmesburg, 58 lights by Suburban E. Co.
Twenty-eight District Station, 94 lights by Diamond E. Co.
Twenty-ninth District Station, 82 lights by Powelton E. Co.
Thirty-first District Station, 100 lights by Diamond E. Co.
Thirty-second District Station, 76 lights by Powelton E. Co.
Thirty-third District Station, 144 lights by Southern E. L. & P. Co.
Thirty-fourth District Station, 102 lights by Southern E. L. & P. Co.

Police stations wired that have no current.

3d District Police Station, 115 lights.
4th District Police Station, 101 lights.
6th District Police Station, 130 lights.
9th District Police Station, 71 lights.
9th District Police Sub-Station, 55 lights.
19th District Police Station, 97 lights.

Stations and Sub-Stations that are not wired.

8th District Police Station.
13th District Police Station.
13th District Police Sub-Station.
14th District Police Station, Olney.
17th District Police Station.
22d District Police Station, Falls.
24th District Police Station, Bridesburg.
30th District Police Station.

Patrol Stations that are lighted.

1st District Patrol Station, 40 lights by Southern E. L. & P. Co.
2d District Patrol Station, 22 lights, by Southern E. L. & P. Co.
7th District Patrol Station, 12 lights, by Northern E. L. & P. Co.
10th District Patrol Station, 36 lights by Kensington E. Co.
11th District Patrol Station, 26 lights, by Kensington E. Co.
12th District Patrol Station, 20 lights, by Northern E. L. & P. Co.
14th District Patrol Station, 12 lights by Germantown E. L. Co.
15th District Patrol Station, 23 lights by Suburban E. Co.
16th District Patrol Station, 19 lights by Powelton E Co.
17th District Patrol Station, 31 lights by Southern E. L. & P. Co.
18th District Patrol Station, 7 lights by Manufacturers' E. Co.
20th District Patrol Station, 30 lights by Edison E. L. Co.
21st District Patrol Station, 24 lights by Powelton E. Co.
25th District Patrol Station, 11 lights by Southern E. Co.
26th District Patrol Station, 17 lights by Kensington E. Co.
27th District Patrol Station, 12 lights by Suburban E. Co.
28th District Patrol Station, 28 lights by Diamond E. Co.
29th District Patrol Station, 13 lights by Powelton E. Co.
31st District Patrol Station, 18 lights by Diamond E. Co.
32d District Patrol Station, 6 lights by Powelton E. Co.
33d District Patrol Station, 14 lights by Southern E. L. & P. Co.
34th District Patrol Station, 21 lights by Southern E. L. & P. Co.

Total, 442

Patrol Stations that are wired and have no circuit.

4th District Patrol Station, 21 lights.
6th District Patrol Station, 19 lights.
9th District Patrol Station, 17 lights.

Patrol Stations that are not wired.

3d District Patrol Station.
13th District Patrol Station.
19th District Patrol Station.
23d District Patrol Station.
30th District Patrol Station.

Police stables that are lighted.

14th District Police Stable, 14 lights by Germantown E. L. Co.
15th District Police Stable, 24 lights by Suburban E. Co.
16th District Police Stable, 22 lights by Powelton E. Co.
21st District Police Stable, 8 lights by Powelton E. Co.
25th District Police Stable, 7 lights by Southern E. L. & P. Co.
27th District Police Stable, 34 lights by Suburban E. Co.
29th District Police Stable, 29 lights by Powelton E. Co.
32d District Police Stable, 6 lights by Powelton E. Co.

Fire Stations that are lighted.

Fire Station No. 1, 101 lights by Southern E. L. & P. Co.
Fire Station No. 2, 76 lights by Northern E. L. & P. Co.
Fire Station No. 3, 76 lights by Southern E. L. & P. Co.
Fire Station No. 5, 69 lights by Powelton E Co.
Fire Station No. 6, 54 lights by Northern E. L. & P. Co.
Fire Station No. 7, 38 lights by Suburban E. Co.
Fire Station No. 8, 94 lights, paid, by Edison E. L. Co.
Fire Station No. 9, 36 lights by Germantown E. L. Co.
Fire Station No. 10, 75 lights by Southern E. L. & P. Co.
Fire Station No. 14, 64 lights by Suburban E. Co.
Fire Station No. 15, 39 lights by Northern E. L. & P. Co.
Fire Station No. 16, 92 lights by Powelton E. Co.
Fire Station No. 17, 86 lights, paid, by Edison E. L. Co.
Fire Station No. 19, 55 lights by Germantown E. L. Co.
Fire Station No. 20, 45 lights, paid, by Edison E. L. Co.
Fire Station No. 21, 50 lights by Northern E. L. & P. Co.
Fire Station No. 23, 71 lights by Northern E. L. & P. Co.
Fire Station No. 24, 90 lights by Southern E. L. & P. Co.
Fire Station No. 25, 87 lights by Northern E. L. & P. Co.

Fire Station No. 27, 43 lights by West End.
Fire Station No. 28, 43 lights by Manufacturers' E. Co.
Fire Station No. 29, 154 lights by Northern E. L. & P. Co.
Fire Station No. 30, 96 lights by Manufacturers' E. Co.
Fire Station No. 32, 92 lights, paid, by Edison E. L. Co.
Fire Station No. 34, 46 lights by West End.
Fire Station No. 36, 56 lights, Suburban E. Co.
Fire Station No. 37, 49 lights by Germantown E. L. Co.
Fire Station No. 38, 65 lights by Suburban E. Co.
Fire Station No. 40, 60 lights by Powelton E. Co.
Fire Station No. 41, 45 lights by Powelton E. Co.
Fire Station No. 43,
Fire Station No. 44, 140 lights, paid, by Edison E. L. Co.
Fire Station No. 9, Truck
Fire Station No. 45, 96 lights by Diamond E. Co.
Fire Station No. 46, 56 lights by Southern E. Co.
Fire Station No. 47, 70 lights by Southern E. Co.
Fire Station No. 48, 60 lights by Southern E. Co.
Fire Station No. 49, 59 lights by Southern E. Co.
Fire Station No. 5, Chemical, 46 lights.
Fire Station No. 6, Chemical, 46 lights.

Fire Stations that are not wired.

Engine No. 11.
Engine No. 12.
Engine No. 13.
Engine No. 26.
Engine No. 31.
Engine No. 33.
Engine No. 35.
Engine No. 39.
Engine No. 42.

Fire Stations that are wired and have no current.

Engine No. 4, 82 lights.
Engine No. 18, 71 lights.
Engine No. 22, 50 lights.
Engine No. 50, 116 lights.
Fire Headquarters, 55 lights, paid, Edison E. L. Co.
Chestnut St. Pier, 29 lights, paid, Edison E. L. Co.
Race St. Pier, 29 lights, paid, Edison E. L. Co.
Vernon Park, 14 lights, Germantown E. L. Co.
Tug Stokley, 50 lights, isolated plant.
Tug Stuart, 70 lights, isolated plant.
Tug Ashbridge, 96 lights, isolated plant.

Stations that are being built—not completed.

No. 1 Police Station.
No. 9 Fire Station.

Total number of lights in Station Houses	2,795
Total number of lights in Patrol Houses	442
Total number of lights in Police Stables	126
Total	3,363

Total number of lights in Fire Stations	2,610
Total number of lights in Truck Stations	251
Total	2,861

Total number of lights in Fire Headquarters	55
Total number of lights in Fire Boat Stuart	70
Total number of lights in Police Boat Stokley	50
Total number of lights in Police Boat Ashbridge	96
Total number of lights in Vernon Park	14
Total number of lights in Race Street Pier	91
Total number of lights in Chestnut Street Pier	29
Total	405

Number of lights in Police Stations	3,363
Number of lights in Fire Stations	2,861
Miscellaneous lights	405
Grand Total	6,629

Truck Stations that have current.

Truck No. 6, 64 lights by Powelton E. Co.
Truck No. 7, combined with Engine No. 29.
Truck No. 8, 65 lights by Germantown E. L. Co.
Truck No. 9, combined with No. 43 Engine.
Truck No. 10, 54 lights by Manufacturers' E. L. Co.
Truck No. 11, 68 lights by Southern E. L. & P. Co.

Total, 251

Truck Stations wired but have no current.

Truck No. 1, 39 lights.
Truck No. 2, 52 lights.
Truck No. 4, 64 lights.
Truck No. 12, combined with Engine No. 50.

Truck Stations that are not wired.

Truck No. 3.
Truck No. 5.

Additional incandescent lamps were introduced as follows:

5th District Station House, 2 lights.
16th District Station House, 8 lights.
18th District Station House, 8 lights.
22d District Station House, 8 lights.
11th District Station House, 8 lights.
27th District Station House, 4 lights.
31st District Station House, 7 lights.
34th District Station House, 4 lights.
20th District Station House, 3 lights.
No. 6 Chemical Fire Station, 2 lights.
No. 6 Engine Fire Station, 9 lights.
No. 8 Engine Fire Station, 3 lights.
No. 5 Engine Fire Station, 5 lights.
No. 17 Engine Fire Station, 2 lights.
No. 30 Engine Fire Station, 4 lights.
Fire Boat Stuart, 3 lights.
Police Boat Ashbridge, 3 lights.

The following Stations were wired and lighted during the year:

31st District Station House, 117 lights.
31st District Patrol House, 17 lights.
34th District Station House, 107 lights.
34th District Patrol House, 18 lights.
28th District Patrol House, 28 lights.
No. 6 Chemical Station. 51 lights.
Race Street Pier, 91 lights.

The Police Boat William S. Stokley, which was being overhauled and remodelled was at the same time rewired and equipped by this Bureau with new and substantial steam-tight fittings and globes, forty-six (46) lamps with all the necessary fittings were used in the installation, a new iron flag-pole was also introduced for the high light, where formerly the old wooden one did duty, the wires are carried through this pole to the light, and are thus made mor readily accessible in case of accident.

The new Race street pier and pavilion on the Delaware River Front, was equipped by the Bureau, at the expense of the Bureau of Highways, with ninety-one (91) lights, with all the steam tight fittings, fixtures, etc., necessary for the perfect installation of the incandescent electrical service, and current was supplied by the Edison Company, at the expense of this Bureau, through a special appropriation made late in the year.

The Philadelphia Morgue at Thirteenth and Wood streets was also equipped with fifty (50) incandescent lamps, the need for which had long been felt. The expense for this installation was born equally by this Bureau and the Bureau of City Property, and current was supplied for the year from the Edison mains at the expense of the Bureau of City Property.

The Band Stand in Vernon Park, in Germantown, was also, owing to its exposed position, re-equipped with steam-tight fixtures and fire and weatherproof wire, fourteen (14) lamps were used in the installation; it is only intended to light this stand during special events.

Chemical Engine No. 6 at Fox Chase was equipped by the Bureau with fifty-one (51) lamps, and lighted free by current supplied by the Suburban Electric Company.

The Matron's new quarters at the Eighteenth Police District, Fourth and York streets, was equipped with eight (8) lamps.

The building No. 817 Richmond street, occupied for some time as a sub-office for the Bureau of Surveys, during the construction of the Aramingo Canal sewer, was discontinued, and late in the year the electrical equipment disconnected.

A number of firms under contract to equip stations with incandescent electrical appliances, not in conformity with the regulations of the Bureau, but under the specifications issued by the Bureau of City Property, completed their installation and complied with their contracts, but were refitted to a standard adopted by the Bureau.

The Headquarters of the Bureau of Fire, Race street east of Broad street, which had been supplied by overhead service, has been connected to the underground service of the Edison Electric Light Co.

Electric Search Lights.

The search light on the new fire boat Samuel H. Ashbridge, which had been placed on the forward mast by its constructors, was, owing to the vibration of the spar, due to the movement of the machinery, practically unfitted for use, the jarring motion given the lamp, causing the carbons to lose their alignment and jamb. This was overcome by placing a brass stand on the forward deck, in front of the pilot house; in this position the best of results have been obtained.

The search lights on the boats Stuart and Stokley have also been overhauled with satisfactory results.

City Hall Equipment.

The electric lighting and annunciator system for the elevators has been maintained at the highest standard of efficiency, requiring the renewing of the electric light cables for elevators Nos. 1 and 2, renewing the electri bell cable for elevator No. 14, the repairs to the various annunciators and the recharging of batteries from time to time made necessary by the severe strain upon them to the aggregate of three hundred (300) cells of batteries.

Under your direction the building was illuminated on the evening of December 31, 1901, and the early morning of January 1, 1902, in celebraton of the New Year with approximately twelve thousand (12,000) incandescent lamps. In addition to having the building proper a blaze of light, from top to bottom, the decorations and streamers were all in place, including the "Arms of the City of Philadelphia," at the north entrance, and the "Arms of

Pennsylvania" at the south entrance. This is the heaviest load the electric lights plant has been subjected to in its history, and the fact that not a single break of any kind occurred, speaks well for the efficiency of the plant on the last day of the year 1901, and the first day of the year 1902.

Of the new work installed from time to time since November 1, 1901, the following is the most important:

New conduit and wiring installed in room No. 177 Department Receiver of Taxes; No. 616, Bureau of Health; No. 616A, Electrical Bureau; Nos. 652, 654,.656, 658, 660 (No. 5 Court of Common Pleas); 662, 664, 666 (District Attorney's Office); new moulding and wiring in the sub-basement for lighting steam plant; conduit and wiring for Corridor lights, Seventh floor, opposite rooms 735 and 765, and conduit and wiring for additional lights in room 721.

The conduit and wiring together with the ceiling husk fixtures installed in rooms 642, 644, 646, 648 and 650, also in connection with the new Court of Common Pleas No. 5, but which was furnished prior to November 1st. This, I believe, is about the only important piece of new work installed from July 1st to November 1, 1901, but the complaints, renewal and repairs, of course, were looked after during that interim.

In connection with the repairs, it was found necessary to test for and remove all grounds and leakages from the system of wiring in the building, caused by leaking of steam-pipes, etc., and in order to do this, it necessitated the opening of such circuits as were found to be in trouble, and as this would naturally leave the rooms fed by the circuits in question without light, instructions were given to do the work on Sundays, when there would be no demand for light in the rooms referred to. This work has been progressing ever since, and during this time we have renewed

20 branch box plates, five (5) junction box plates and 250 feet of 4/0 lead covered cable, and 150 feet of 2/0 lead covered cable. It will require considerable more of this extra work to entirely clear the system of leaks and grounds.

Since the electrical equipment of the building has been placed under control of this Bureau, we have compiled and filed schedules showing the location, number and style of fixtures, together with the number of arc and incandescent lamps in City Hall, also fan motors, which are summarized as follows:

	Arc lights.	Incandescent lamps.
Basement	4	1,211
First Floor	96	1,357
Second Floor	43	1,924
Third Floor	24	701
Fourth Floor	31	1,945
Fifth Floor	29	734
Sixth Floor	40	1,569
Seventh Floor	19	759
Eighth and Ninth Floors		184
Clock Face		548
	286	10,932
Tower Arcs, 150 16-Amp.		
Tower Arc Lamps equivalent to Incandescent lamps		250
286 Arc Lamps equivalent to incandescent lamps		2,860
		14,042
Roof Lights and Streamers for Decorations	4,174	
Design City Arms	240	
Design State Arms	400	
Design U. S. Arms	235	
Design "Welcome"	220	
		5,269
		19,311

In connection with the lights for decoration purposes, I would state that they are arranged about as follows: all lights being two feet apart.

6th Floor Gutter, 1,914 feet No. 2 wire	**957 lamps.**
Roof Gutter, 2,250 feet No. 2 wire	**1,125 lamps.**
4 Tower Streamers, 440 feet No. 2 wire, each 220 lamps each.	**880 lamps.**
32 centre pavilion streamers:	
8 43 feet long No. 10 wire	**716 lamps.**
8 40 feet long No. 10 wire	
8 36 feet long No. 6 wire	
8 60 feet long No. 6 wire	
12 Corner Pavilion Streamers, 60 feet each. No. 8 wire	**360 lamps.**
4 Short Streamers at top of Tower, 60 feet each, No. 8 wire	**120 lamps.**
"Penn's" Hat, 32 feet No. 10 wire	**16 lamps.**
	4,174 lamps.

Motors.

There are 174 1/6 and $\frac{1}{8}$ Hp. fan motors located in the various rooms throughout the building, aggregating 27 Hp. or the equivalent to 324—16 cp. lamps.

The City Hall Electric Light plant as at present installed gives a capacity of 1,000 K. W., or a normal rating of 8,000 amperes; 16,000—16 Cp. lamps and consists of five 200 K. W. compound wound multipolar Westinghouse dynamos; five 300 Hp. direct coupled Ames engines and Keystone Switchboard instruments. The dynamos and engines are highly efficient, as are the mains or feed wires between the dynamos and switchboard. The instruments on the switchboard are of a make not at present used, and are unreliable in their readings, and consequently overloading and damage to the machines is likely to occur. To obviate this, I would respectfully suggest that the present instruments be discontinued and replaced with standard Weston instruments, the reliability of which I am confident would result in a considerable saving in lamp renewals, owing to the introduction of a normal and even voltage.

The Switchboard, which is of White Italian Marble (2″) two inches thick, 40 ft. long and 8 feet 6 inches high consists of five Dynamo Panels, each 2 ft. wide, located in the centre, and five circuit Panels on the left and five on the right, each 3 ft. wide.

On each dynamo panel is mounted a 2,000 ampere Circuit Breaker, a Rheostat, a 2,000 amp. Double pole, Double Break, Double Throw Knife Switch, a 2,000 Amp. single pole, Double Throw, Double Break Knife switch and a 2,000 Amp. Keystone Ammeter, Shunt Type.

On the middle Dynamo Panel there is also mounted, at right angles to the face of the board, a volt meter, with scale readings on both sides, used in taking voltage of machines when throwing them in service. Each of the two Dynamo Panels alongside of the centre panel have a volt meter, and a volt meter switch mounted on them in addition to the instruments mentioned above.

The five circuit panels to the left control the basement, first, second, third and fourth floors; three of those on the right control the fifth, sixth and seventh floors, and each of these eight panels have mounted on them four—350 amp. double pole, double break single throw fused switches connected to the main busbars through a 1,200 amp. Circuit Breaker, and a series Keystone ammeter; also four 150 amp. D. P. D. B.—S. T. fused switches connected direct to the auxiliarysetof busbars. Of the other two panels to the right, one controls the Council Chambers and one the Tower lighting. On the Council Chambers Panel is mounted two—350 Amp. D. P.—D. B. S. T. fused switches, connected to the main busbars through a circuit breaker and a series Ammeter, also a 2,000 Amp. T. P.—D. B. S. T. Knife switch which connects the main and auxiliary busbars through a series 2,000 Amp. ammeter.

The Tower Panel has mounted on it five 350 amp. D. P. D. B. S. T. fused switches, four of which are connected through a Circuit breaker and a series ammeter to the main busbar, and the remaining one is connected directly to the auxiliary busbars.

The Positive and Equalizer dynamo leads are connected directly to the main or auxiliary busbars through the 2,000 Amp. D. B. D. P. D. T. switches, and the negative leads run to the circuit breakers, to the ammeter shunts and through the 2,000 Amp. S. P. D. B.—D. T. switch to the main or auxiliary negative busbar. This arrangement allows any machine to be thrown on either set of busbars, the main or auxiliary.

The 350 Amp. switches mentioned control the feeders supplying current for the room lights, and the 150 Amp. switches control the feeders of the corridor lights; consequently the room and corridor lights can be controlled separately. At present we feed the auxiliary bars from the main busbars through the three pole 2,000 Amp. connecting switch.

The method of wiring the building consists in running a circuit from each of the 350 Amp. switches on a panel to one of the four corners of the floor corresponding to that panel for the room lights, and also a circuit from each of the 150 amp. switches to the corresponding corner on that floor for the Corridor lights.

The feeders for the even floors are run on the floor above except the 1st floor feeds, which are run in the basement for the N. W., N. E. and S. E. corners; the S. W. corner feeds for 1st floor and basement are run on the first floor; sub feeds for the room lights are run from the corners along the floors of each of the intersecting corridors through branch plates located on either side of the doorways to the centres of the corridors where each meets the sub feeds of the other corner, and are connected by junction plates. From the branch plates located on either side of the doorways branch circuits are run into the rooms on the same floor and the floor below.

The sub feeds for the corridor lights are run in the centre of the corridor floor through branch plates, from the corners to the centre of each corridor where they are connected in junction boxes by junction plates. By this arrangement each corner can be fed independently by disconnecting the feeders in the centre junction boxes.

The switches on the Tower panel control the clock face lights, the Tower arc lamps, the Tower elevator, the Tower rooms and the illumination of the N. E. Cor. of the building.

Sizes of Feeders for Room and Corridor Lights.

	Room feeders.	Corridor feeders.
Basement:		
N. W. Corner,	240,000 C. M.	
N. E. Corner,	240,000 C. M.	
S. E. Corner,	240,000 C. M.	
S. W. Corner,	240,000 C. M.	
First Floor:		
N. W. Corner,	320,000 C. M.	No. 000
N. E. Corner,	320,000 C. M.	
S. E. Corner,	320,000 C. M.	
S. W. Corner,	320,000 C. M.	
Second Floor:		
N. W. Corner,	320,000 C. M.	No. 000
N. E. Corner,	320,000 C. M.	
S. E. Corner,	320,000 C. M.	
S. W. Corner,	320,000 C. M.	
Third Floor,	240,000 C. M.	No. 000
Fourth Floor,	360,000 C. M.	No. 000
Fifth Floor,	270,000 C. M.	No. 000
Sixth Floor,	360,000 C. M.	No. 000
Seventh Floor,	270,000 C. M.	No. 000
Tower,	400,000 C. M.	
Council Chambers,	400,000 C. M.	

In making a computation of the cost of the electricity generated by the City Hall Plant for the lighting of the building for a given period, the following is to be considered a fair estimate. This compilation is made from the records of the past six months, except in the matter of the cost of the original installation of the machinery of the plant which has been traced back to the first installation in 1882.

The cost of producing the current for the past six months embraces a period of three light and three dark months. And the average hourly load has been 1,402 Amperes or 161.2 Kilowatts, and has cost $127.87 per day, or $.033 per Kilowatt hour.

Recapitulation.

New conduit, wiring and lights installed in rooms: 177, 616, 616 A., 642, 644, 648, 650, 652, 654, 658, 660, 662, 664, 666—Seventh floor, corridor opposite rooms 735 and 765—New moulding and wiring for additional lights in sub-basement.

325—Additional lights located since July 1, 1901.

Complaints, renewals and repairs—principal repairs were on account of grounds and leakages on electric light system, requiring the renewal of 20 branch plates, 5 junction boxes, 250 feet, 4/0 lead covered cable, 150 ft. 2/0 lead covered cable.

Two hundred and eighty-six (286) Arc lamps are maintained in the building, in addition to the 16 Tower lights which required considerable care, due to the exposure they are subjected to.

Repairs to elevators—300 cells of battery were used in renewals—2 cables for electric lights renewed. One cable for bells renewed.

The Illumination and Decorations of December 31, 1901, utilized the greatest load from the dynamos in the history of the plant—6,000 amp. or 12,000, 16 cp. lights.

In addition to the work at City Hall, inspections were made at the First District Police Station, Expositions Buildings and the work installed by the Merchants' and Miners' Transportation Company, at Race Street Pier.

The search lights on all the three police and fire boats carrying them have been placed in the best of condition and are ready for immediate service.

Police Telegraph.

The new Thirty-first and Thirty-fourth District Police stations were connected, and the instruments at the Sixth and Sixteenth Districts transferred from the temporary quarters occupied by them during rebuilding to their newly appointed quarters.

The instruments at the First Police District were, during the rebuilding of the old house, transferred to new temporary quarters.

Seven hundred and twenty-two thousand five hundred and ninety-seven messages were transmitted over the lines of this service during the year, an increase over 1900 of thirty-eight thousand seven hundred and eighty-one (38,781).

Police Signal and Telephone System.

A departure from former operating methods was made in the establishing of the four wire system in the Twenty-four Police District patrol service. Nineteen stations, including the police station house, were equipped with new transmitters and receivers, the property of the City, and placed on the newly erected wires, the energy controlling the system being centralized at the police station house in the shape of thirteen cells of Partz battery, eliminating the trouble heretofore had with the hooks and individual cells of battery in the patrol boxes. The line is perfectly free from interruption and performs the service expected of it in a manner extremely gratifying. While making these changes, the boxes themselves which had formerly been placed so low in the booths as to be uncomfortable for conversational purposes, were raised to a position more practical.

The instruments at the Sixteenth District, which had been placed in the dwelling nearby, were removed to the new house on its completion, while those at the First and Sixth Districts were temporarily transferred to other quarters pending the completion of their new buildings.

The new pier at Race street, Delaware, was connected with the Fourth District, and the instruments in the Southwestern National Bank transferred to their new quarters, N. E. Cor. Broad and South streets. The title of the West Philadelphia Bank, who has this service, was changed to the Hamilton Trust Company.

The new Thirty-first District was equipped with twelve boxes and headquarters at Twenty-sixth and York streets and the Thirty-fourth District with fourteen boxes, and headquarters at Fifteenth and Snyder avenue.

The Second National Bank, at Frankford avenue and Unity street, was at the usual yearly rental connected with the Fifteenth District patrol.

Five million eight hundred and twenty thousand one hundred and thirty-one (5,820,131) signals were transmitted over the circuits of this system during the year, an increase of forty-five thousand nine hundred and twenty-three (45,923) over 1900. Five million seven hundred and fifty-nine thousand nine hundred and ninety-nine (5,759,999) were telephone calls, sixty-six thousand nine hundred and six (66,906) reports from private institutions, sixty thousand one hundred and thirty-two (60,132) were wagon calls.

A summary of the wagon calls show thirty-eight thousand two hundred and sixty-seven (38,267) were for the conveyance of prisoners, ten thousand three hundred and seven (10,307) for the conveyance of injured persons and one thousand five hundred and fifty-one (1,551) for the conveyance of officers to and from fires and ten thousand and seven (10,007) for miscellaneous work.

There are six hundred and seventy-nine (679) patrol boxes in use in the City, apportioned as follows:

Patrol.	Police district.	Private boxes.	Total boxes.
1	First,	..	14
1	Fifth,	3	20
2	Second,	..	13
3	Third,	2	22
4	Fourth,	1	20
6	Sixth,	2	17
7	Seventh,	..	19
7	Eighth,	..	20
9	Ninth,	2	21
10	Tenth,	..	14
11	Eleventh,	..	17
12	Twelfth,	..	24
13	Thirteenth,	..	17
14	Fourteenth,	2	44
15	Fifteenth,	1	21
16	Sixteenth,	..	21
17	Seventeenth,	..	15
18	Eighteenth,	..	28
19	Nineteenth,	2	18
20	Twentieth,	1	13
21	Twenty-first,	3	24
22	Twenty-second,	..	18
23	Twenty-third,	1	29
24	Twenty-fourth,	..	18
25	Twenty-fifth,	..	25
26	Twenty-sixth,	..	22
27	Twenty-seventh,	3	19
28	Twenty-eighth,	..	17
29	Twenty-ninth,	..	22
30	Thirtieth,	..	33
31	Thirty-first,	..	12
32	Thirty-second,	..	12
33	Thirty-third,	..	16
34	Thirty-fourth,	..	14
		23	679

Thirty-eight street stations and one private box were added during the year.

The First, Second, Third, Fifth, Sixth, Seventh, Tenth, Eleventh, Twelfth, Thirteenth, Sixteenth, Nineteenth, Twentieth, Twenty-first, Twenty-second, Twenty-eighth, Thirtieth, Thirty-first and Thirty-second districts each receiving one.

The Fourth, Fourteenth, Fifteenth, Twenty-third, Twenty-sixth, Twenty-ninth and Thirty-fourth each receiving two.

The Seventeenth and Twenty-seventh each receiving three.

The private box being located in the Fifteenth District.

Fire Signal and Telephone.

The newly equipped Truck Co. No. 11 and Engine No. 49 and the residences of Fire Marshal Lattimer and Assistant Fire Marshals Wilkins, Sheldrake, Hill and Campbell were connected with this service; later, on the resignation of Mr. Campbell, the set was transferred from his residence to that of the newly appointed Asst. Fire Marshal Smith; further, on the removal of Mr. Smith the instruments were transferred to his new residence.

The new fire house at Bustleton, and the large room in which the companies foremen met at Fire Headquarters were connected with this service.

The set located at Dr. Hart's residence was transferred to his new residence on Frankford avenue, north of Huntingdon street. The instruments at Engines No. 23 and No. 30 were removed to their newly equipped quarters.

Fire Signal.

By the request of the Commander of the U. S. Arsenal at Frankford, this Bureau, at the expense of the U. S. Government, purchased, connected and placed in position a fire signal box, No. 1728.

Also, at the request and expense of the management of the People's Theatre, Kensington avenue and Cumberland street, this Bureau, purchased, connected and placed in position fire signal box No. 1715.

The signal box located on the fourth floor of the Masonic Temple, was, at the request of the Temple Committee, transferred to the fifth floor.

A number of signal circuits were dropped into police stations for test.

The fire box formerly located in the hallway at the Philadelphia Hospital was removed to the telephone operator's room.

Fire Alarm.

Small eight-inch gongs were connected at the residences of Fire Marshal Lattimer, Asst. Fire Marshals Wilkins, Shelldrake, Smith, Hill and Asst. Engineer Leithead, and the regulation sixteen-inch gong into the newly established quarters of Truck No. 11 and Engine No. 49.

The small (8-inch) gong was moved from the old to the new building of the U. G. I. Co., and that formerly located in the residence of Ex. Asst. Engineer Graham was transferred and connected to the residence of Asst. Eng. Andress.

Number of Alarms of Fire.

Seven hundred and ninety-two (792) alarms of fire were transmitted over the wires during the year, of which seven hundred and twenty-nine (729) were first alarms, twenty-eight (28) second alarms, fourteen (14) third alarms, nine (9) fourth alarms, five (5) fifth alarms, and seven (7) false alarms.

One hundred and three (103) signals were received over the wires in connection with the above, but as they duplicated other alarms they were not transmitted.

Telephones.

The municipal telephone system has assumed such proportions as to necessitate and demand formal recognition for its betterment; the switchboard established in 1890 having no place with the advanced ideas of the day, will by virtue of an appropriation made this Bureau for the coming year, be supplanted by an up-to-date equipment. With this perfected apparatus the annoyances to which the offices in City Hall are at present subjected will be eliminated.

Connections were Made to the Electrical Bureau Switchboard During the Year as follows:

Residence of Director English.
Chief Clerk, Room 217, City Hall.
Residence of Dr. Shoemaker.
Civil Service Board, Secretary's Office.
Filtration Department, Bureau of Water, Chief Engineer.
Secretary Hammond, Board of Education.
Receiver of Taxes, Department of Water Rents.
Superintendent of City Ice Boats, Room 391, City Hall.
Bureau of Surveys, Registrar's Office.
Residence, Secretary to the Mayor.
Residence, Driver for Fire Marshal.
Room 281, City Hall.
Residence Secretary to the Mayor, No. 2129 South Fifteenth Street.
Room 113, Superintendent City Hall.
Matthew Patton, No. 3900 Woodland Avenue.
Room 610, City Hall.
Residence, Chief Clerk Select Council, No. 2138 Fitzwater St.
Residence, Clerk to Mayor, No. 1960 North Thirty-first Street.
Office of Superintendent of Police.
Electrical Bureau, Police Operators.
District Attorney's Offices—five (5) sets of instruments.
County Commissioners, three (3) sets of instruments.
Pennsylvania Hospital, Receiving Ward.
Residence, Chairman of Electrical Committee.
Residence, Fire Marshal Lattimer, No. 3949 Baltimore ave.
Residence, Asst. Fire Marshal Wilkins, No. 225 North Camac street.

Residence, Asst. Fire Marshal Sheldrake, No. 1504 Ridge avenue.

Residence, Asst. Fire Marshal Campbell, No. 823 Preston street; later, on his resignation, these instruments were disconnected and transferred to residence of Asst. Fire Marshal Smith.

Furthering Advance in the Telephone Branch of the Bureau; Improved Instruments were Placed in the following Offices:

Headquarters Bureau of Fire.
Mayor's Secretary.
Asst. Director of Public Works.
Fire Marshal Lattimer.
Presbyterian Hospital.
University Hospital.
Philadelphia Hospital.
The Morgue.
Pennsylvania Hospital.
Oil Inspector, Room 311, City Hall.
Clerk, Highway Committee, Room 491, City Hall.
Receiver of Taxes, Room 102, City Hall.
Office Chief of Bureau of Health.
Asst. Clerk Select Council.
Delinquent Taxes, Room 110.
Residence Asst. Manager Electrical Bureau.
Samaritan Hospital.
Residence, Chief Bureau of Health, Bala.
Schuylkill Harbor Police Boat.
Director Public Works.
Police Clerks, Room 215, City Hall.

The office of the Department of Filtration, No. 710 City Hall, and the Belmont Filtration Plant, were connected to the Bureau of Water.

The Weidner Branch of the Free Library was connected to the Electrical Bureau switchboard.

The instruments at the Jewish Hospital were moved from the quarters so long occupied by them to an adjoining room.

The set of instruments formerly located at Fortieth and Locust streets, destroyed by fire, was replaced and relocated at the new office of the Twelfth District Survey, No. 3802 Market street.

The instruments heretofore located in the hallway at the Philadelphia Hospital were changed to a desk set and placed in the new operating room at that institution.

On the retirement of Mr. Joseph Paist from the Chief Clerkship of Select Council the instruments located at his residence were discontinued and placed in the residence of the new Chief Clerk, Mr. William J. Milligan.

The office No. 817 Richmond street, occupied by the Bureau of Surveys while supervising the construction of the Aramingo Canal, was on its completion abandoned, and the telephone instruments connected therewith discontinued.

The set of instruments located in the office of the Survey District, No. 1242 South Broad street, was, on the retirement of the then Assistant, transferred to the office of the new appointee, Colorado and Snyder avenue.

The telephone instruments at the West Philadelphia Library were moved to their new quarters No. 4105, to 4109 Chestnut street.

The set of instruments located at the office of ex-Chairman of the Highway Committee, Mr. Dixon, at Manayunk, was disconnected.

Telephone instruments purchased by the Bureau were connected at new patrol stables, Race street, east of Second street, connecting with the Fourth District.

The new Thirty-fourth District Patrol Station was connected with the Police Station.

A full set of instruments was placed—temporarily connected—in the Lieutenant's room at the First District, connecting with the patrol station.

The Twenty-eighth District Patrol Stables were connected with the Police Station.

A half set was placed in the patrol box Thirteenth and Bainbridge streets.

Telephonic connection between the First and Seventeenth District and the First District patrol stables was on the acquirement of the First District patrol station, maintained on the same lines as when connected for the same patrol wagon.

A set of instruments connected with the City Hall was placed in the operators' cabin at the Gray's Ferry bridge.

Nine rooms of the Bureau of Surveys were connected locally with instruments composing what is termed a speaking tube set.

The switchboard in the dynamo-room in the basement of City Hall was moved and connected to the switchboard in City Hall.

Rooms 85, the electric light department, and No. 128, the supply department, were connected to the switchboard in the dynamo-room.

With a view of permanently connecting the new Gray's Ferry bridge with this office, cables have been laid from the centre or pivot pier to the piers on the east and west ends, the eastern pier has been connected by 'phone to this office, while the western end, with a view of making assurances doubly sure, has been connected to the western shore, where connection will be made with the Twenty-first District Police Station, Thirty-seventh and Woodland avenue, this with a view of a breakdown in the electrical appliances, it may enable the bridge operators to call in the manual labor necessary to operate the draw.

Operations of Telephone Switchboard.

One million one hundred and seventy-one thousand five hundred and thirty-seven (1,171,537) calls and connections were made, and thirty-eight thousand nine hundred and fifty-one (38,951) messages received and transmitted over the telephone switchboard during the year, an increase of twenty-eight thousand one hundred and ninety-one, 28,191) connections and a decrease of two thousand four hundred and forty-two messages. Four thousand nine hundred and ninety-three (4,993) calls for ambulances were given through this service during the year.

Pipe Line.

In connection with the fire water main mentioned in the forward pages of this report, twenty-five (25) fire telephone stations have been established, viz:

Water and Race streets.
Second and Race Streets.
Third and Race streets.
Water and Arch streets.
Second and Arch streets.
Third and Arch streets.
Front and Market streets.
Second and Market streets.
Third and Market streets.
Fourth and Market streets.
Fifth and Market streets.
Sixth and Market streets.
Eighth and Market streets.
Ninth and Market streets.
Eleventh and Market streets.
Twelfth and Market streets.
Thirteenth and Market streets.
Water and Walnut streets.
Second and Walnut streets.
Third and Walnut streets.
Fourth and Walnut streets.
Fifth and Walnut streets.
Sixth and Walnut streets.
Seventh and Walnut street.
Eighth and Walnut streets.

Accompanying this list, fifty new locations practically covering the "fire belt" have been provided for, and will be equipped early in the coming year, in ample time to meet the requirements of the Bureau of Fire practical operation.

Trolley.

The perfected system of trolley service existing in Philadelphia to-day, has resulted in many communications from other cities, requesting information embracing details covering the same.

The Union Traction Company has not only submitted itself almost entirely to the judgment of the Bureau in the matter of introducing proper facilities for the protection of overhead and underground service foreign to their own, but, have in many instances anticipated by the introduction of innovations with a view of overcoming such difficulties as might possibly present themselves.

In their efforts to maintain the best of constructed trolley systems, they have done a great deal in the way of adding to and increasing their return capacity by re-bonding over fifty miles of track, as follows:

Spruce street, from Thirty-third to Forty-second street, double track.

Forty-second street, from Chestnut street to Chester avenue, double track.

Chester avenue, from Forty-second to Forty-ninth street, double track.

Forty-ninth street, from Chester to Woodland avenue, double track.

Walnut street, from Thirty-third street to Woodland avenue, double track.

Columbia avenue, from Seventh to Thirty-third street, double track.

Franklin street, from Columbia avenue to Race street, single track.

Seventh street, from Race to Arch street, single track.

Filbert street, from Seventh to Twentieth street, single track.

Sansom street, from Seventh to Nineteenth street, single track.

Thirteentth street, from Spring Garden street to Cumberland street, single track.

Fifteentth street, from Spring Garden to Cumberland street, single track.

Fifteenth street, from Cherry to Vine street, single track.

Sixteenth street, from Spring Garden to Huntingdon street, single track.

Twenty-ninth street, from Poplar street to Columbia avenue, double track.
Twentieth street, from York to Tasker street, single track.
Arch street, from Tenth to Twenty-first street, double track.
Twenty-first street, from Arch to Callowhill street, single track.
Spring Garden street, from Twenty-third street to Bridge, double track.
Haverford avenue, from Thirty-third street to Lancaster avenue, single track.
Lancaster avenue, from Forty-fourth to Fifty-second street, double track.
Lansdowne avenue, from Fifty-second to Sixty-third street, double track.
Market street, from Bridge to Lancaster avenue, double track.
Forty-first street, from Market street to Haverford avenue, double track.
Haverford avenue, from Forty-first to Fifty-second street, double track.
Haverford avenue, from Fifty-second to Sixty-seventh street, single track.
Sixty-fifth street, from Haverford avenue to Vine street, single track.
Vine street, from Sixty-fifth street to Haverford avenue, single track.

In addition to the above they have renewed their rails on the following streets, using an extra heavy fish plate at joints, cleaned by sand blast before being put on, riveted with snug fitting rivets, and all poured full of Zinc smelter, making, as far as tests have shown, the best electrical contact across the joints, known:

Spring Garden street, from Broad to Twenty-third street.
Second street, from Pine to Willow street.
Third street, from Spruce to Willow street.
Tenth street, from Arch to Callowhill street.
Spring Garden Street Bridge.
Fifteenth street, from Tioga street to Indiana avenue.
Indiana avenue, from Broad to Fifteenth street.

Also the new line, just built between Frankford and Germantown, on Chew street, Stenton avenue, Twentieth street, Wyoming avenue, Olney avenue.

Arrott and Orthodox streets, while constructed of the zinc joint have not been in service as yet.

The new line built on Forty-ninth street, from Chester avenue to Baltimore avenue, and on Fifty-second street from Baltimore avenue to Lancaster avenue, is doubly bonded with two 0000 bonds at each joint, the entire length.

Additional heavy wires have been connected from rails to the negative cables in manholes, as follows:

Thirteenth street, from Spring Garden to Cumberland street.
Fifteenth street, from Spring Garden to Cumberland street.
Sixteenth street, from Spring Garden to Huntingdon street.
Second street, from Pine to Willow street.
Third street, from Spruce to Willow street.

Have placed heavy cables under twenty-six (26) steam railroad crossings and connected to the 9″ girder rails, bonds being continually broken in the crossings.

Have renewed thirty-seven miles of trolley wire, principally as follows:

Thirteenth street, from Market to Diamond street.
Fifteenth street, from Market to Diamond street.
Seventeenth street, from Market to Huntingdon street.
Nineteenth street, from Market to Huntingdon street.
Huntingdon street, from Seventeenth to Nineteenth street.
Twenty-ninth street, from Poplar street to Columbia avenue.
Girard avenue, from Fourth to Twenty-sixth street.
Ridge avenue, from Fifteenth to Twentieth street.
York road, from Germantown avenue to County line.
York street, from Twentieth to Thirty-third street.
Dauphin street, from Thirty-third street to Sedgley avenue.
Sedgley avenue, from Dauphin to York street.
Ridge avenue, from Susquehanna avenue to York street.
Twelfth street, from Jackson to Porter street.
Sixteenth street, from Jackson to Porter street.
Porter street, from Twelfth to Sixteenth street.
Market street, from Delaware avenue to Fifteenth street.
Spring Garden street, from Twentieth to Twenty-fourth street.
Chestnut street, from Front street to Schuylkill river.
Walnut street, from Front street to Schuylkill river.
Front street, from Chestnut to Walnut street.

Have reset thirty-two trolley poles, and taken down and removed entirely one hundred and thirty-four.

Located for the Union Traction Company two hundred and ninety-three (293) new trolley poles.

Located for the Bell Telephone Company sixty-seven (67) terminal poles.

A temporary trolley line was built, and is still in operation, on Shawmont avenue, between River Schuylkill and the Reservoirs, for the purpose of hauling materials to the new filter beds, all bonded and properly connected with the returns of the Manayunk & Roxborough Incline Plane Railway Company, current supply taken from same company's power house.

Cars started to run on the following lines, viz:

Gray's Ferry road, between Thirty-sixth street and Woodland avenue, April 1st.

Coulter street and Midvale avenue, between Ridge avenue, Falls and Wayne street, Germantown, June 15th.

Electrolysis.

Numerous tests for electrolysis in all sections of the city disproves the fallacy so often expressed that the overhead wire with ground return system of trolley propulsion cannot be maintained without disasterous results to other substructures. There is nothing in this City to-day that can show destructive action incident to escaping trolley currents.

Gray's Ferry Bridge Equipment.

In addition to the equipment placed on the new Gray's Ferry Bridge last year, the following has been added by this Bureau: Two push buttons from operators cabin to a ten-inch vibrating bell at each end of the swing span for the purpose of calling either or both watchmen, should assistance be needed below.

A push button from each safety gate on deck to a vibrating bell in operators cabin, to be used by the watchman in case of emergency, to warn the operator not to open swing span until all difficulties be adjusted. For this service 300 feet of 4 conductor cable was introduced across the west channel of the river. Equipped the two iron electric light poles on the swing span with a group of five incandescent lamps on each, from a single pole switch in operators cabin, using the trolley feed cables already there.

Laid conduit from the west approach at Forty-seventh street to first trolley pole, completed the cable connection, through a 250 ampere, single pole, quick break switch and 300 ampere no-arc fuse, placed in a cable box on the trolley pole, there connecting with a special feed cable furnished by the Union Traction Company, giving the electrical service on the bridge a feed connection from both sides of the river.

Under the supervision of this Bureau, the following has been placed on the bridge, by contract, for the Bureau of Surveys.

One extra 57 H. P. Iron Armored, railway type motor, a duplicate of those already there and in service, to be used in case of accident to the one operating the end toggles, rail splices, etc., connected by a double throw switch so that either can be used at will.

A two H. P. motor, direct connected to a pump, in lower floor of operators cabin, for purpose of supplying air to a set of tanks from which the air whistle is operated. Current taken from the service previously installed, properly protected by an automatic circuit breaker, placed on a polished marble switchboard in upper floor of operators cabin, in addition to a single pole quick break switch, on positive and negative side of circuit, and a Weston's round ammeter, 10 amperes capacity. Also five incandescent lamps in series; two over switchboard and three over motor, controlled by a single pole switch.

An Electrical Indicator placed in upper floor of operators' cabin as a check upon the accuracy of the automatic latch, by which the draw span is aligned in place when closing, the apparatus consisting of 10 incandescent lamps, mounted in a neat oak case, glass front, five for each end of swing, one of each being in series with a group of four back of the board, changing from one to the other, by the finger contacts until the swing span is centered.

Protection Against Currents of High Frequency.

The combination set of automatic protectors, ½ ampere fuses, sneak current fuses and lightning arresters have been placed in the Sedgley Guard house, and several of the outlying Engine and Station houses; it is my purpose to continue introducing this protection until all stations have been covered.

License Returns.

Fifty-nine thousand four hundred and ninety-six (59,496) dollars were paid into the City Treasury by the electric light, telegraph and telephone companies, as license charges on poles, wires, etc., for the year 1901, a decrease of three thousand nine hundred and forty-six (3,946) dollars from 1900.

Money Paid Receiver of Taxes.

Seventy-one thousand two hundred and fifty-two and 33/100 dollars (71,252.33) were paid to the Receiver of Taxes to the credit of this Bureau during the year 1901, itemized as follows:

License charges for 1901	**$54,496 00**
Police Signal and Telephone Service for 1900	**219 09**
Police Signal and Telephone Service for 1901	**1,212 78**
Rental of Ducts in City Conduits for 1901	**8,487 50**
Rental of Wires in City Cables for 1901	**1,813 72**
Miscellaneous	**23 24**
	$71,252 33

a decrease from 1900 of $7,233.22.

Number of Poles, Mileage of Wire, Etc.

According to the returns made by the telegraph, telephone, electric light and street railway companies, there were overhead on the highways of the city, exclusive of those along railroad tracks:

21,827	wood poles, an increase of 1,978 since 1900.
29,249	iron poles in use by trolley companies, an increase of 103 since 1900.
6,482	City poles, wood, decrease of 70 since 1900.
2,340	City poles, iron, increase of 30 since 1900.
24	Girard Estate, iron.
56,617	Total increase of 1,952 since 1900.
4,121.298	miles of wire in aerial cable.
5,559.750	miles of telegraph and telephone wire, decrease of 1,298.050 since 1900.
2,137.92	miles of electric light wire, increase of 127.48 since 1900.
1,621.72	miles of City wire, increase of 8.40 since 1900.
693.76	miles of trolley wire, increase of 19.12 since 1900.
14,134.448	miles. Total increase of 2,979.248 since 1900.

There are 19,795 attachments to City poles, being an increase of 1,712 since 1900, to support 501.58 miles of wire, a decrease of 50.15 miles.

Appropriations.

Of the one million two hundred and twenty-one thousand five hundred and ninety and 95/100 dollars (1,221,590.95) appropriated and transferred to the Bureau for the year 1901, one million two hundred and ten thousand and ninety-nine and 53/100 (1,210,099.53) dollars were expeded, eleven thousand four hundred and ninety-one and 42/100 (11,491.42) dollars merged.

Poles and Wires Taken Down by City.

This Bureau has taken down and removed from the streets one hundred and fifty-seven (157) poles, and one hundred and twenty and 1/10 (120.1) miles of overhead telegraph and telephone wire belonging to the City.

Inventory of Instruments and Fixed Property in Use and Owned by the City Under the Care of this Bureau.

376,796	feet of conduit.
2,803,678	feet of duct.
1,167	manholes.
369	iron signal box parts.
178	patrol box parts.
137.65	miles of telegraph and telephone cable underground.
3,893.36	miles of telegraph and telephone conductor underground.
1,317	junction boxes.
52.21	miles of electric light cable underground.
1,621.72	miles of overhead wire.
6,482	wooden poles.
2,340	iron poles.
1,040	mast-arms.
3,200	cells Callaud battery.
3,090	Leclanche dry and other open circuit batteries.
63	Edison Lelande battery.
1,233	fire signal boxes, 74 of which are private and 11 on stages of theatres.
113	keyless doors.
30	Bell magnets on fire signal circuits.
679	police patrol signal and telephone, and telephone boxes, of which 349 are wall and 23 located in banks and other private institutions.
35	police signal and telephone office sets.
308	police booths.
368	telephones (City).
767	telephones (leased from Bell Company).
93	alarm instruments located in engine houses, depots, etc., of which 16 are private.
74	Bell magnets and keys connected with fire signal and telephone service.
8	banks of relays, five circuits to a bank.
1	three dial manual repeater.
1	four dial manual repeater.
1	telephone switchboard, capacity 325 circuits.
1	fire alarm switchboard, capacity 100 circuits.
2	motor dynamos for telephone switchboard work.

52	police instruments.
52	relays on marble base for police instruments.
1	complete set of Thompson's reflecting galvanometers.
1	Bunnel galvanometer and Wheatstone bridge.
1	Bradley galvanometer and rheostat.
1	Weston direct and alternating current volt meter.
2	Weston direct current volt meters.
1	West direct current milli voltmeter.
3	Weston direct current ammeters.
1	Weston direct current milli ammeter.
1	Weston multiplier for direct current volt meter.
5	dynamos, with a capacity of 200 K. W. each, in City Hall.
	Lamp capacity in City Hall 16,000—16 cp.
23,132	incandescent lamps, 5,200 of this number being used for purpose of illuminating City Hall.
302	incandescent arc lamps and 174 fan motors, with the necessary sockets, shades, switches, etc., with hundreds of push buttons, calls, buzzers, etc.

It is largely through the personal effort of the newly appointed manager of the Bureau, that the introduction of the system of underground conduits and cables, planned and plotted by the Chief, has been so successfully introduced, untiring in his efforts to forward the interests of the Department and Bureau, he has known no hours, working when necessity required, which frequently occurs, night and day, and unceasingly until the object to be desired was consummated, and I feel that, that part of your Department which he so ably represents is much benefited by the experience he brings to it.

The proper and efficient lighting of the City Hall is assured under the able direction of the present Superintendent of Electric Lighting. Fitted by long experience in installation and construction, he has entered upon his new duties with the confidence of one who knows his ground. In daily communication with the Chief, there has been formulated a line of policy, which, if we be permitted to follow out, will before the presentation of another report, offer for your consideration as complete and efficient a system of electric lighting for a municipal building, as can be shown on any city on the continent.

The newly appointed First Assistant Manager so ably fitted by his long experience to fill the position to which you have assigned him, and thoroughly familiar with details, will become a valuable acquisition to my working force, and prove a credit to your Department.

The corps of men in this Bureau entitled Inspectors, have ably and capably performed the duties assigned them, and intelligently carried forward all suggestions and plans submitted by the Chief, in the improvement and extension of the service under the care of this Bureau.

The Chief Line Inspector and his men have ably seconded the efforts of the other branches of the service, in pushing the different branches of the service under our control into those sections of the City hitherto unserved, and caring for and maintaining that portion whose long life necessitated rehabilitation and renewal.

There has been used in extensions, improvements and repairs four hundred (400) wood poles, two thousand and thirteen (2,013) cross-arms, twenty-two (22) coils No. 8 iron wire, two hundred and sixteen (216) miles of bare copper wire, forty (40) miles covered copper wire, one hundred and eighty-one (181) break-arms, thirty (30) iron brackets, eight thousand four hundred and eighty (8,480) feet of 4 conductor aerial cable, two thousand and six (2,006) feet of gas pipe, one hundred and fifty-seven (157) poles were removed from the streets and one hundred and twenty and 1/10 (120.1) miles of wire taken down, erected ten (10) signal boxes, moved sixty-four (64) signal boxes, erected twenty-eight (28) and moved three (3) patrol wall boxes, transferred fourteen (14) patrol booths, moved twenty-nine (29), reset forty (40), and abandoned one hundred and fifty-five (155) poles, paved around two hundred and ninety-six (296), cemented around twenty-seven (27), and relaid eight (8) flag stones around poles, put on one hundred (100) guys, trimmed eight hundred and ninety-five (895) trees, removed eighty-five (85) old stumps of poles, and performed a great amount of work which is impossible to enumerate in a report of this nature.

Excluding enumeration and the entering into of details, I can but say, that the men comprising the personal of this Bureau, have during the year, as they have done heretofore, again forcibly illustrated, as is shown through the detail matter of this report, their ability to ably meet and master, all questions pertaining to the advancement and maintenance of the multitudinous affairs of the Bureau, and are in every way worthy of the commendation I offer for your consideration.

To secure the efficiency and prevent interruptions to the service, the old paraffine covered wires, connected in 1886, the conducting medium between the switchboard in the operating room, and the cross board in the store room on the eighth floor, which had been damaged by fire, were replaced by six new 31 conductor cables, these were connected to 40—6 wire flat cables extending into the battery room, a cross board of two rows of clips was introduced, the lower taking the circuit from the operating room, the upper, those leading to the battery room. All connections were made between the two strips and connections soldered, by this we are perfectly immune from interruption to our service.

Miscellaneous.

In spite of all precautions offered by careful supervision or that taken by those whose business it is to erect and maintain electric wires, accidents of a more or less serious character are sure to occur. Accompanying this will be found a summary of those happening during 1901.

On January 21st, Frederick Meyers, aged 15 years, residing 1234 Birch street, severely burned one hand, by grasping the end of a live wire, on the west of the Reading Railroad, near Thirty-second and Thompson streets.

On April 3d, one of Berg & Co.'s horses was killed by contact with a heavily charged trolley pole on Second street, south of York street. The trolley pole was charged by contact with an electric light wire, which was fastened to the span wire, supporting the trolley guard wires.

On April 11th, William Budd, a Diamond Electric Co.'s lineman, was killed on pole at Germantown avenue and Hunting Park avenue, while working on a live wire.

On June 4th, James Smiley, a Bell Telephone Co.'s lineman, was killed by falling from a Western Union Telegraph Co.'s pole at the northwest corner of Ridge avenue and Green street.

On July 13th, Michael Levin, a Bell Telephone Co.'s lineman, was severely injured about the head, by one of the Company's poles falling with him, on private property near Leverington avenue and Smick street.

On July 22d, Elmer Gottschalk, was killed by contact with a live wire, while moving hoisting gear on roof of Swift's Meat Storage Warehouse, southeast corner American and Norris streets.

On July 23d, James Farrel, was severely shocked by contact with a live wire, while working in a manhole at Twenty-fourth and Green streets.

On August 28th, John Winning, a Bell Telephone Co.'s lineman, fell from a pole on Church street, east of Paul street; shoulder badly bruised and broken.

On September 4th, John Judson (colored) fell from Union Traction Co.'s pole at Passyunk and Washington avenues; injured about the head.

On September 7th, Thomas Stevens, a Southern E. L. & P. Co.'s lineman, fell from tree on Penrose Ferry road above Point Breeze Driving Park, breaking both wrists.

On September 11th, Thomas Gayley, a Diamond Electric Co.'s trimmer, was shocked and fell from pole southwest corner Thirtieth and Susquehanna avenue; severely injured about the head and hip.

On September 23d, T. Kyle, a Bell Telephone Co.'s lineman, fell from pole at Lawrence and Green streets, fracturing his foot.

On October 12th, William Pickett, a Northern Electric Light & Power Company's trimmer, was shocked and fell from pole on the east side of Fourth street, opposite Harlan street, fracturing his skull, and receiving other injuries.

On October 13th, Sigmund Shylaski, a Northern Electric Light & Power Company's trimmer, was shocked and fell from pole southwest corner Tenth and Dauphin streets, and killed.

On October 15th, David Wark, aged 20 years, residing at 4147 Leidy avenue, was shocked to death, while playing foot ball in Fairmount Park, near Forty-second and Parkside avenue. The accident occurred in the evening, after the lights were turned on. Some one kicked the foot ball into the lamp, where it stuck fast, and Wark, in trying to release it, received the shock that killed him.

On November 25th, Newburg C. Gill, an employee of the Western Union Telegraph Company, while repairing wires on American street, south of Cumberland street, was killed by the wire which he was handling coming in contact with a live wire.

On December 28th, Robert Leary, aged 19 years, residing at 2220 South Eighth street, was found dead in the basement of Huling's dry goods store. He was employed by William Thornley, 1203 South Eighth street, to replace a burned out fuse in the circuit, supplying surrent for the elevator machinery. The supposition is, that he was shocked by contact with an automatic starting switch, and a gas bracket, within three feet of it. The body was found about twelve or fourteen feet from the switch, and outside the enclosure surrounding the elevator machinery. There was but 500 Volts on the circuit.

In presenting to you, this, my first annual report, I would most respectfully direct attention to, and submit for your consideration, the intelligent and efficient manner in which the force under my control have performed the duties assigned them, and desire to express my appreciation of the confidence placed in me by both the Mayor and yourself; thanking you for the uniform courtesy and valued assistance rendered me in the administration of the affairs of the Bureau.

Yours very truly,

JOHN C. SAGER,

Chief of Bureau.

Summary of the Police Signal and Telephone Service.

MONTHS.	CALLS FROM PRIVATE INSTITUTIONS DURING 1901.																		Total of all Calls.
	Guarantee Trust Co., 3d District.	6th National Bank, 3d District.	West End Trust Co., 3d District.	Market St. Nat Bank, 6th District.	Commonwealth Trust Co., 6th District.	Keystone Watch Case Co., 9th District.	Mint—17th and Spring Garden Sts., 9th District.	Germantown Trust Co., 14th District.	Germantown National Bank, 14th District.	2d National Bank, 15th District.	Mint—Juniper and Chestnut Streets, 19th District.	Southwestern Nat'l Bank, 19th District.	City Treas'r's Office, 20th District.	Centennial National Bank, 21st District.	Museum—University of Pa., 21st District.	Hamilton Trust Co., 21st District.	Northwestern Bank, 23d District.	Total Calls from private Institutions.	
January	162	403	279	61	365	341	744	372	215	......	485	423	555	188	403	504	180	5,630	487,527
February	148	364	252	54	325	308	570	336	192	......	455	399	504	173	367	477	186	5,110	447,253
March	164	412	279	62	372	341	744	367	225	......	479	417	536	187	409	509	189	5,692	508,344
April	160	396	270	60	360	330	720	360	193	......	451	393	521	187	394	493	185	5,473	485,082
May	166	411	279	62	372	341	744	372	211	......	479	417	529	194	410	501	193	5,681	510,591
June	162	396	270	60	360	330	720	359	208	......	465	405	522	183	394	495	193	5,522	483,894
July	164	421	279	62	372	340	745	372	183	......	479	417	537	192	429	504	207	5,703	500,183
August	162	409	279	62	372	340	745	372	181	......	470	408	528	186	427	454	165	5,560	484,556
September	156	396	270	60	360	330	720	359	205	......	483	423	528	185	461	505	195	5,636	475,251
October	166	405	279	62	372	341	744	372	217	......	470	408	530	189	438	496	201	5,690	483,255
November	162	406	270	60	360	330	570	360	207	92	471	415	528	185	414	490	187	5,507	471,477
December	164	410	279	62	372	341	554	371	214	176	440	428	544	191	403	511	192	5,652	482,718
Totals	1,936	4,829	3,285	727	4,362	4,013	8,320	4,372	2,451	268	5,627	4,953	6,362	2,240	4,949	5,939	2,273	66,906	5,820,131

SUB-D		
N.	E	
	Horses.	
21	14	...
41	64	...
51	36	
87	25	...
24	18	....
9	26	....
37	11	....
48	32	....
21	35	
71	28	....
39	7	....
30	23	....
1	1	....
..	26	....
3	6	....
23	22	
6	18	.....
7	11	.....
3	25	.....
3	16	.....
6	43	.....
4	15	.....
5	18	

34th District.	Total.
....	483,392
8,040	443,061
10,367	503,690
11,269	480,252
11,535	515,072
10,541	478,661
11,480	494,144
10,336	479,010
10,483	469,868
9,607	478,455
10,409	466,744
8,867	477,650
112,934	5,759,999

Showing the Box in each District having the Greate ⁊ umber of Telephone Calls during the year 1901.

Districts.	No. of Box.	Location.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
First	8	Fifteenth and Catharine sts	1,291	1,065	1,238	1,260	1,275	1,259	1,182	1,193	1,144	1,128	1,230	1,312	14,577
Second	31	Thirteenth and Bainbridge sts	2,360	2,004	2,322	2,232	2,281	2,234	2,283	2,282	2,235	2,280	2,234	2,282	27,029
Third	52	Seventh and Walnut sts	1,712	1,544	1,716	1,664	1,704	1,657	1,710	1,703	1,681	1,711	1,684	1,701	20,197
Fourth	341	Seventh and Race sts	1,871	1,729	1,879	1,832	1,825	1,836	1,872	1,792	1,762	1,794	1,806	1,319	21,317
Fifth	25	Twenty-third and Sansom sts	1,194	1,094	1,208	1,106	1,210	1,184	1,092	1,262	1,224	1,218	1,223	1,241	14,256
Sixth	34	Tenth and Arch sts	1,476	1,272	1,418	1,409	1,601	1,400	1,544	1,328	1,377	1,739	1,275	1,141	17,000
Seventh	43	Delaware ave. and Callowhill st.	1,243	1,101	1,220	1,183	1,260	1,190	1,258	1,233	1,196	1,213	1,269	1,228	14,546
Eighth	21	Ninth and Spring Garden sts	1,423	1,210	1,434	1,434	1,392	1,289	1,513	1,337	1,414	1,273	1,128	1,205	16,052
Ninth	12	Nineteenth and Fairmount ave.	2,295	1,948	2,294	2,221	2,293	2,219	2,267	2,276	2,209	2,206	2,207	2,207	26,632
Tenth	431	Lawrence st. and Girard ave	2,659	2,425	2,680	2,585	2,615	2,530	2,565	2,445	2,415	2,589	2,530	2,655	30,693
Eleventh	321	Belgrade st. & Susquehanna ave	1,201	1,173	1,165	1,135	1,203	1,110	1,125	1,016	1,145	1,179	1,119	1,147	13,718
Twelfth	3	Watts st. and Girard ave	1,205	1,115	1,198	1,158	1,229	1,160	1,202	1,203	1,196	1,235	1,205	860	13,931
Thirteenth	3	Ridge ave. and Main st	1,144	1,024	1,197	1,115	1,133	1,115	1,145	1,119	1,116	1,133	1,078	1,131	13,313
Fourteenth	125	Germantown ave. & School lane.	969	905	982	919	986	968	919	803	849	951	640	534	10,425
Fifteenth	152	Frankford ave, & Margaretta st.	1,197	1,071	1,155	1,107	1,212	1,114	1,155	1,071	1,002	1,018	1,008	1,014	13,122
Sixteenth	27	Thirty-sixth and Lancaster ave.	1,176	964	1,130	1,112	1,162	1,085	1,143	1,143	1,117	1,128	1,101	1,091	13,352
Seventeenth	52	Point Breeze ave. & Dickinson st	1,390	1,295	1,308	1,323	1,398	1,401	1,413	1,382	1,401	1,387	1,379	1,387	16,463

Showing the Box in each District having the Greatest Number of Telephone Calls—Continued.

Districts.	No. of Box.	Location.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
Eighteenth	16	Philip and Berks streets........	875	788	870	852	878	847	875	874	845	874	843	867	10,290
Nineteenth	55	Broad and Sansom.............	1,307	365	398	1,304	1,391	1,254	1.153	1,103	1,307	1,222	1,286	1,254	8,978
Twentieth	27	Nineteenth and Race streets....	1,073	1,071	1,195	1,200	1,139	1,100	1,144	1,025	1,051	1,068	1,058	1,123	13,247
Twenty-first	134	Fortieth and Locust streets.....	1,954	1,855	2,243	1,935	1,965	1,855	1,814	1,774	2,038	1,885	1,969	1,784	23,071
Twenty-second...	221	Twentieth and Tioga streets....	1,116	1,008	1,123	1,086	1,119	1,085	1,120	1,110	1,090	1,120	1,090	1,125	13,192
Twenty-third	21	Twenty-third and Columbia av.	1,694	1,636	1,674	1,640	1,694	1,694	1,680	1,690	1,640	1,688	1,626	1,660	20,016
Twenty-fourth....	42	Richmond st. and Allegheny av.	529	534	540	542	540	552	567	561	526	571	527	561	6,550
Twenty-fifth......	144	Thirteenth and Jackson streets.	897	1,221	1,724	1,789	1,764	1,507	1,619	1,558	1,726	1,725	1,754	1,564	18,848
Twenty-sixth......	221	Adams st. and Frankford ave...	1,167	1,052	1,176	1,135	1,170	1,133	1,165	1,179	1,132	1,170	1,127	1,116	13,776
Twenty-seventh ..	22	Keystone and Disston streets..	744	672	744	720	744	720	744	744	720	744	720	1,271	9,287
Twenty-eighth....	36	Twenty-ninth and Diamond sts.	1,137	1,089	1,145	1,110	1,085	1,110	1,087	1,045	1,022	1,040	1,023	1,126	13,009
Twenty-ninth.....	423	Forty-eighth and Lancaster av.	1,206	1,080	1,223	1,165	1,217	1,219	1,267	1,195	1,121	1.133	1,111	1,192	14,129
Thirtieth..........	252	Broad st. and Wingohocking av.	709	751	760	694	667	658	743	790	764	726	598	612	8,467
Thirty-first	122	Nineteenth st. and Lehigh ave..	384	928	1,364	1,350	1,550	1,410	1,572	1,565	1,404	1,566	1,388	1,586	16,067
Thirty-second	512	Seventy-second & Woodland av.	1,787	1,847	1,818	1,838	1,831	1,385	1,523	1,304	1,193	1,268	1,477	1,566	18,537
Thirty-third......	61	Ninth and Christian streets.....	1,179	1,060	1,153	1,152	1,147	1,060	872	808	831	662	956	994	11,864
Thirty-fourth.....	144	Thirteenth and Reed streets....	......	1,721	2,148	2,344	2,232	2,389	2,006	2,258	1,920	1,795	2,082	1,636	22,531

Showing the Box in each District having the Greatest Number of Wagon Calls during the year 1901.

Districts.	No. of Box.	Location.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
First	4	Sixteenth and Bainbridge streets	9	15	16	13	30	16	13	12	30	18	18	16	206
Second	17	Seventh and Bainbridge streets	45	20	23	36	26	38	41	37	41	23	26	30	391
Third	44	Sixth and South streets	49	59	56	46	54	61	76	74	80	64	71	82	812
Fourth	341	Seventh and Race streets	3	8	7	11	15	16	10	19	25	18	15	13	160
Fifth	125	Seventeenth and Addison streets	17	10	8	13	24	11	12	9	17	17	16	21	175
Sixth	55	Ninth and Race streets	27	31	33	29	32	22	30	24	29	7	11	14	289
Seventh	26	Fifth and Callowhill streets	11	5	15	27	23	17	29	20	26	27	16	23	239
Eighth	18	Seventh and Callowhill streets	5	13	16	16	18	5	14	20	23	18	9	16	173
Ninth	22	Twenty-fifth and Callowhill streets	18	22	29	25	23	25	25	31	20	29	14	29	290
Tenth	314	Second Street and Girard avenue	13	13	22	19	34	19	20	18	20	23	13	15	229
Eleventh	34	Richmond and Cumberland streets	18	20	21	12	21	15	17	18	19	20	19	21	221
Twelfth	8	Twelfth street and Columbia avenue	3	5	6	4	6	7	7	7	3	10	5	8	71
Thirteenth	16	Main and Jamestown streets	11	9	20	18	21	25	30	25	24	20	23	27	253
Fourteenth	6	East Chelten avenue	6	4	6	8	10	9	9	10	11	7	8	12	96
Fifteenth	152	Frankford avenue and Margaret street	3	2	4	4	4	1	7	4	5	7	2	10	53
Sixteenth	24	Lancaster avenue and Preston street	14	11	17	12	20	14	10	14	13	4	11	12	152
Seventeenth	5	Twenty-second and Alter streets	4	10	7	8	6	10	8	7	10	8	7	6	91

Showing the Box in each District having the Greatest Number of Wagon Calls—Continued.

Districts.	No. of Box.	Location.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Total.
Eighteenth	8	Hope and Diamond streets	9	11	8	6	20	12	18	19	19	13	6	7	148
Nineteenth	4	Twelfth and South streets	17	17	18	10	20	27	19	15	23	15	22	28	231
Twentieth	3	Fifteenth and Market streets	37	45	36	40	59	29	29	28	30	42	35	44	454
Twenty-first	331	Thirtieth and Chestnut streets	7	4	3	5	7	10	11	4	5	10	6	9	81
Twenty-second	233	Germantown and Indiana avenues	6	4	5	4	4	2	5	2	4	6	3	7	52
Twenty-third	21	Twenty-third street and Columbia avenue	13	12	7	8	5	10	17	16	19	7	11	12	137
Twenty-fourth	15	Somerset and Ruth streets	10	9	14	22	13	8	9	8	12	12	15	28	160
Twenty-fifth	421	Eighth aud Mifflin streets	4	8	15	10	8	12	19	7	12	11	10	11	127
Twenty-sixth	222	Emerald and Huntingdon streets	6	7	11	6	10	10	5	13	23	11	15	9	126
Twenty-seventh	23	State road and Robbins street	2	3	1	1	3	3	3	2	1	....	4	2	25
Twenty-eighth	36	Twenty-ninth and Diamond streets	3	7	13	15	15	15	12	13	5	21	10	6	135
Twenty-ninth	213	Fifty-sixth and Vine streets	3	2	4	7	12	12	14	3	8	12	4	4	85
Thirtieth	33	Kensington avenue and "C" street	8	8	7	9	4	8	7	5	3	6	5	5	76
Thirty-first	6	Sixteenth and Huntingdon streets	....	8	6	6	5	13	4	9	6	3	5	5	70
Thirty-second	243	Forty-ninth street and Woodland avenue	8	11	8	7	6	14	6	10	13	9	5	11	108
Thirty-third	46	Second and Manton streets	3	8	12	18	12	10	15	9	8	12	10	22	139
Thirty-fourth	144	Thirteenth and Reed streets	....	12	14	20	27	20	24	20	20	18	15	16	206

Synopsis of Wagon Calls of the Various Patrols during the Year 1901.

Months.	Patrol No. 1—1st & 5th Dist's.					Patrol No. 2—2nd District.					Patrol No. 3—3rd District.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners,	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	123	15	4	30	172	204	30	6	15	255	220	36	28	78	362
February	132	18	11	38	199	142	29	8	21	260	236	42	19	68	365
March	124	20	7	35	186	207	21	2	15	245	249	39	21	86	395
April	142	19	6	34	201	209	34	4	24	271	235	51	26	78	390
May	200	16	6	37	259	224	47	4	15	290	217	58	29	72	376
June	135	25	2	26	188	244	58	1	14	317	255	62	33	77	427
July	156	41	5	41	243	236	79	5	17	337	232	106	46	104	488
August	131	27	5	28	191	212	54	5	19	290	255	59	35	83	432
September	154	16	6	31	207	211	48	5	13	307	314	51	29	78	472
October	145	22	4	31	202	179	34	3	15	231	309	47	33	89	478
November	155	20	4	30	209	156	39	3	15	213	304	42	36	93	475
December	189	24	2	39	254	187	43	5	16	251	283	64	33	98	478
Total	1,786	263	62	400	2,511	2,441	516	51	199	3,207	3,109	657	368	1,004	5,138

Synopsis of Wagon Calls of the Various Patrols during the Year 1900—Continued.

MONTHS.	PATROL NO. 4.—4TH DISTRICT.					PATROL NO. 7-7TH & 8TH DISTRICTS					PATROL NO. 9.—9TH DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	62	23	......	13	98	130	21	6	48	205	118	50	3	24	195
February	86	16	2	39	143	108	24	7	47	186	142	41	4	22	209
March	86	15	3	28	132	196	40	9	63	308	146	51	......	22	219
April	93	29	5	27	154	180	33	10	53	276	154	53	2	21	230
May	117	23	3	50	193	211	30	13	43	297	149	57	2	46	254
June	97	24	.....	51	172	170	49	10	48	277	146	56	2	29	233
July	83	97	1	48	229	172	97	13	83	365	164	144	4	28	340
August	111	53	......	53	217	216	55	7	56	334	178	58	5	29	271
September	104	51	3	43	201	232	28	8	48	316	173	69	3	33	278
October	109	43	4	44	200	161	38	6	71	276	166	65	3	32	266
November	104	37	1	30	172	187	39	6	59	291	164	59	5	19	247
December	150	34	4	10	198	187	44	9	69	309	177	55	3	19	254
Total	1,202	445	26	436	2,109	2,150	498	104	688	3,440	1,877	759	36	324	2,996

Synopsis of Wagon Calls of the Various Patrols during the Year 1900—Continued.

MONTHS.	PATROL No. 10—10TH DISTRICT.					PATROL No. 11—11TH DISTRICT.					PATROL No. 12—12TH DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	148	11	6	12	177	136	25	2	6	169	47	12	5	22	86
February	150	16	2	14	182	118	31	3	12	164	49	21	5	16	91
March	151	27	3	19	200	140	37	......	18	195	48	17	11	19	95
April	138	23	......	23	184	103	26	......	12	141	65	16	5	31	117
May	170	20	3	42	235	110	26	......	21	157	69	23	2	27	121
June	135	26	1	26	188	129	55	2	19	205	74	27	4	23	128
July	143	65	2	30	240	104	89	2	30	225	43	36	3	46	128
August	184	29	1	47	261	92	52	2	27	173	74	23	3	23	123
September	169	24	2	24	219	115	28	3	28	174	62	38	3	22	125
October	139	25	2	20	186	105	34	4	18	161	57	22	12	20	111
November	128	21	......	17	166	105	28	1	12	146	56	24	6	15	101
December	140	19	1	24	184	119	34	4	33	190	71	36	8	28	143
Total	1,795	306	23	298	2,422	1,376	465	23	236	2,100	715	295	67	292	1,369

Synopsis of Wagon Calls of the Various Patrols during the Year 1901—Continued.

MONTHS.	PATROL NO. 13—13TH DISTRICT.					PATROL NO. 14—14TH DISTRICT.					PATROL NO. 15—15TH DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	38	16	2	6	62	34	23	4	25	86	10	3	......	7	20
February	28	14	4	6	52	21	15	9	22	67	21	10	......	1	32
March	51	17	1	4	73	37	15	5	26	83	13	14	......	8	35
April	44	13	1	4	62	48	9	3	36	96	19	7	......	4	30
May	50	11	5	8	74	54	15	3	35	107	35	12	......	3	50
June	51	18	2	3	74	68	15	3	30	116	25	11	......	7	43
July	45	58	2	3	108	48	23	2	33	106	22	31	......	5	58
August	55	28	1	3	87	65	24	2	44	135	27	9	......	4	40
September	53	23	2	6	84	45	14	1	32	92	22	12	......	4	38
October	48	28	2	4	82	43	17	2	20	82	16	10	......	4	30
November	54	15	1	1	71	54	15	4	25	98	26	9	......	2	37
December	53	14	5	5	77	78	26	2	46	152	37	12	1	10	60
Total	570	255	28	53	906	595	211	40	374	1,220	273	140	1	59	473

Synopsis of Wagon Calls of the Various Patrols during the year 1901—Continued.

MONTHS.	PATROL NO. 16—16TH DISTRICT.					PATROL NO. 17—17TH DISTRICT.					PATROL NO. 18—18TH DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	167	23	2	12	204	137	13	1	5	156	65	34	2	57	158
February	162	28	9	12	211	61	10	......	3	74	98	29	2	57	186
March	152	32	13	20	217	49	15	......	4	68	80	18	3	58	159
April	127	28	6	13	174	63	9	1	6	79	144	32	2	83	261
May	160	50	3	15	228	79	14	1	9	103	128	29	4	99	260
June	121	45	4	18	188	79	25	1	4	109	97	29	5	82	213
July	118	75	1	19	213	88	26	1	3	118	93	40	1	72	206
August	128	52	7	15	202	81	20	1	4	106	121	31	1	80	233
September	140	34	1	13	188	89	19	......	6	114	93	25	1	92	211
October	109	50	7	25	191	84	14	1	6	105	94	27	2	16	139
November	114	42	6	25	187	92	8	2	11	113	94	22	2	55	173
December	138	42	8	15	203	78	20	2	6	106	72	18	2	60	152
Total	1,636	501	67	202	2,406	980	193	11	67	1,251	1,179	334	27	811	2,351

Synopsis of Wagon Calls of the Various Patrols during the year 1901—Continued.

MONTHS.	PATROL NO. 19—19TH DISTRICT.					PATROL NO. 20—6TH & 20TH DIST'S.					PATROL NO. 21—21ST DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	131	23	5	21	180	358	54	5	53	470	57	16	2	13	88
February	119	24	7	29	179	359	48	4	53	464	61	24	10	10	105
March	116	22	4	16	158	387	42	2	61	492	87	17	6	11	121
April	116	17	6	31	170	371	53	3	72	499	62	14	3	11	90
May	164	18	4	25	211	372	57	4	79	512	71	26	7	14	118
June	127	27	5	14	173	298	56	......	59	413	79	23	3	19	124
July	159	52	5	27	243	275	119	3	71	463	77	37	1	16	131
August	131	15	3	37	186	247	61	7	71	486	76	25	3	18	122
September	149	26	5	34	214	360	61	3	65	489	82	19	3	16	120
October	131	21	3	19	174	224	82	4	76	406	78	20	5	21	124
November	123	30	12	20	185	297	55	3	66	421	70	16	8	30	124
December	58	25	3	14	100	310	61	4	65	440	62	25	6	12	105
Total	1,524	300	62	287	2,173	3,978	749	42	791	5,560	862	262	57	191	1,372

Synopsis of Wagon Calls of the Various Patrols during the year 1901—Continued.

MONTHS.	PATROL No. 22—22D DISTRICT.					PATROL No. 23—23D DISTRICT.					PATROL No. 24—24TH DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	41	19	1	24	85	43	38	3	16	100	98	30	5	......	133
February	32	19	3	18	63	36	25	2	27	90	76	16	5	10	107
March	54	10	7	17	88	52	31	3	26	112	75	15	4	7	101
April	41	13	3	36	93	52	30	1	33	116	92	19	2	38	151
May	72	14	4	28	118	69	34	......	32	105	88	18	6	49	161
June	52	28	5	23	108	68	19	1	29	117	95	28	8	41	172
July	73	32	4	17	126	45	32	2	48	147	74	45	4	61	184
August	53	14	2	25	94	67	29	1	34	131	104	26	4	32	166
September	60	10	2	23	95	80	22	1	27	130	77	24	2	44	147
October	65	17	7	27	116	45	33	5	37	120	59	22	5	42	128
November	48	13	4	18	83	47	36	6	15	104	60	17	5	43	125
December	61	11	1	15	88	51	31	7	31	115	77	35	7	63	182
Total	652	191	43	271	1,157	655	380	27	385	1,417	975	295	57	430	1,757

Synopsis of Wagon Calls of the Various Patrols during the Year 1901—Continued.

MONTHS.	PATROL NO. 25.—25TH DISTRICT.					PATROL NO. 26.—26TH DISTRICT.					PATROL NO. 27.—27TH DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	94	29	6	11	140	73	4	......	3	80	3	4	2	20	29
February	98	47	3	3	151	80	4	......	2	86	2	3	9	18	32
March	126	33	2	11	172	104	10	1	2	117	6	4	2	22	34
April	132	33	4	17	186	81	6	......	13	100	9	8	......	22	39
May	150	54	6	24	234	101	5	......	11	117	13	4	1	32	50
June	124	52	1	16	193	88	11	......	12	111	9	11	......	27	47
July	104	82	......	16	202	69	24	......	11	104	10	14	4	21	49
August	121	61	......	19	201	118	6	......	6	130	12	9	1	26	48
September	161	53	1	14	229	94	12	......	8	114	8	4	1	22	35
October	120	58	2	14	194	79	3	......	6	88	4	4	1	17	26
November	132	47	5	8	192	83	6	......	4	93	13	3	1	21	38
December	113	50	2	20	185	90	12	......	3	105	4	10	1	33	48
Total	1,475	599	32	173	2,279	1,060	103	1	81	1,245	93	78	23	281	475

Synopsis of Wagon Calls of the Various Patrols during the year 1901.—Continued.

MONTHS.	PATROL NO. 28.—28TH DISTRICT.					PATROL NO. 29.—29TH DISTRICT.					PATROL NO. 30.—30TH DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	26	10	3	3	42	39	5	6	30	80	84	14	2	13	113
February	43	6	2	4	55	43	4	1	37	85	69	15	3	19	106
March	39	14	5	10	68	61	3	8	54	126	82	12	3	13	110
April	52	8	4	14	78	56	3	5	57	121	88	10	3	14	115
May	78	7	2	15	102	66	7	4	59	136	127	17	2	13	159
June	44	15	2	14	75	67	8	6	64	145	118	29	6	22	175
July	38	30	1	9	78	78	27	3	62	170	114	57	3	12	186
August	41	15	1	15	72	76	14	3	65	158	135	13	1	18	167
September	40	11	2	7	60	68	4	5	60	137	81	24	2	18	125
October	32	14	3	14	63	49	9	4	42	104	67	18	4	11	100
November	42	10	2	12	66	45	6	3	39	93	71	19	3	20	113
December	26	8	1	6	41	43	17	3	44	107	69	27	5	23	124
Total	501	148	28	123	800	691	107	51	613	1,462	1,105	255	37	196	1,593

Synopsis of Wagon Calls of the Various Patrols during the Year 1901.—Continued.

MONTHS.	PATROL NO. 31.—31ST DISTRICT.					PATROL NO. 32.—32D DISTRICT.					PATROL NO. 33.—33D DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	2	5	1	3	11	32	7	1	11	51	95	24	4	5	128
February	32	13	4	23	72	36	8	1	4	49	70	24	4	5	103
March	53	12	5	15	85	31	10	2	12	55	92	23	4	2	121
April	45	18	4	32	99	33	10	3	11	57	116	28	6	7	157
May	32	12	1	31	76	46	15	1	9	71	138	39	6	6	189
June	52	25	3	56	136	50	15	2	4	71	116	50	......	15	181
July	59	30	5	37	131	45	26	......	10	81	111	60	6	7	184
August	54	30	2	41	127	47	12	3	10	72	123	42	12	14	196
September	47	16	5	31	99	51	15	1	12	79	86	53	9	23	171
October	42	24	7	43	116	47	18	3	13	81	76	37	5	8	126
November	42	22	5	49	118	38	10	2	16	66	92	32	5	5	134
December	40	14	4	41	99	42	10	1	10	63	107	40	4	11	162
Total	500	221	46	402	1,169	498	156	20	122	796	1,227	452	65	108	1,852

Synopsis of Wagon Calls of the Various Patrols during the Year 1901—Continued.

MONTHS.	PATROL NO 34—34TH DISTRICT.				
	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January					
February	58	18	2	6	84
March	57	15	....	12	84
April	65	10	3	15	93
May	88	15	3	20	126
June	86	13	....	15	114
July	96	31	4	20	151
August	64	17	3	11	95
September	81	15	2	15	113
October	65	15	2	12	94
November	55	13	4	7	79
December	72	11	3	7	93
Total	787	173	26	140	1,126

Synopsis of Wagon Calls during 1901.

MONTHS.	Conveyance of Prisoners.	Conveyance of Injured Persons.	Conveyance of Officers to and from Fires.	Miscellaneous.	Total Wagon Calls.
January	2,815	617	117	586	4,135
February	2,768	633	145	646	4,192
March	3,151	651	136	716	4,654
April	3,175	662	121	872	4,830
May	3,648	773	129	969	5,519
June	3,299	935	112	887	5,233
July	3,174	1,725	133	1,007	6,039
August	3,504	964	121	957	5,546
September	3,531	849	111	892	5,383
October	2,967	871	145	817	4,800
November	3,051	755	145	782	4,733
December	3,184	872	136	876	5,068
Totals	38,267	10,307	1,551	10,007	60,132

Summary of the Operations of the Fire Alarm Telegraph during the Year 1901.

MONTHS.	First Alarms.	Second Alarms.	Third Alarms.	Fourth Alarms.	Fifth Alarms.	Sixth Alarms.	False Alarms.	Totals.
January	62	3	1	1	......	......	2	69
February	83	3	3	2	......	......	1	92
March	68	5	2	......	......	......	......	75
April	60	1	1	1	......	......	......	63
May	56	4	1	......	......	......	......	61
June	51	......	......	......	......	......	......	51
July	51	2	1	......	......	......	......	54
August	38	1	1	1	1	......	1	43
September	46	2	1	1	1	......	1	52
October	69	3	3	3	3	......	1	82
November	74	3	......	......	......	......	......	77
December	71	1	......	......	......	......	1	73
Totals	729	28	14	9	5	......	7	792

Showing the Number of Alarms for each Hour during the year 1901.

MONTHS.	A. M.						P. M.						Total Day Alarms.	A. M.						P. M.						Total Night Alarms.	Total.
	6	7	8	9	10	11	12	1	2	3	4	5		6	7	8	9	10	11	12	1	2	3	4	5		
January....	2	1	1	1	1	4	3	3	1	2	3	7	29	3	6	5	2	1	6	5	5	3	1	1	2	40	69
February...	1	1	1	4	6	4	2	2	3	8	4	4	40	5	10	7	2	9	4	4	2	4	....	3	2	52	92
March......	....	1	....	2	2	3	3	5	....	1	4	3	24	5	5	7	5	2	6	4	2	8	5	2	....	51	75
April.......	1	1	....	1	....	2	7	4	1	3	4	3	27	3	3	8	1	3	8	3	1	2	2	1	1	36	63
May........	2	2	....	5	2	1	2	2	1	3	2	1	23	1	4	3	4	5	3	7	5	1	1	4	....	38	61
June........	2	....	3	1	3	3	2	1	....	6	1	2	24	2	3	3	6	2	1	1	3	2	1	3	....	27	51
July........	....	2	2	1	6	2	2	5	2	....	2	4	28	1	2	4	5	3	2	3	2	1	3	....	....	26	54
August......	1	....	1	2	....	1	2	2	2	1	3	2	17	1	3	1	1	4	2	1	5	4	1	2	1	26	43
September.	2	....	1	2	1	3	1	3	2	3	2	....	20	4	9	3	3	2	1	1	....	4	1	1	3	32	52
October.....	2	5	2	6	9	4	1	2	3	....	2	2	38	9	4	4	7	3	6	5	1	2	1	2	....	44	82
November..	2	3	1	1	1	10	2	5	5	5	3	1	39	2	5	1	4	3	5	3	4	3	5	2	1	38	77
December..	1	....	3	3	3	2	2	3	2	6	2	3	30	4	7	7	6	2	2	4	3	6	1	1	....	43	73
Total...	16	16	15	29	34	39	29	37	22	38	32	32	339	40	61	53	46	39	46	41	33	40	22	22	10	453	792

Months.	Total Number of Messages.	Received.	Sent.	Mayor.		Director Department of Public Safety.	
				R.	S.	R.	S.
January	3,624	1,319	2,305	13	5	30	50
February	3,301	1,198	2,103	4	6	32	41
March	3,763	1,624	2,139	3	1	18	22
April	3,003	1,261	1,742	......	1	17	20
May	2,994	1,203	1,791	5	3	4	10
June	3,251	1,330	1,921	4	6	18	21
July	2,780	1,118	1,662	......	2	8	11
August	2,658	1,058	1,600	1	1	2	5
September	3,500	1,501	1,999	5	2	4	13
October	3,781	1,733	2,048	......	2	20	31
November	3,075	1,198	1,877	......	8	18	29
December	3,221	1,420	1,801	4	5	25	33
Totals	38,951	15,963	22,988	39	42	196	286

Showing the Number of Alarms from each Box during 1901.

Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.
2	1	58	5	146	1	224	2	324	1	414	1	495	1
3	1	59	2	147	2	225	3	327	2	418	1	498	3
4	1	61	1	151	1	227	2	328	2	423	2	499	2
7	1	63	2	152	1	228	1	332	1	427	1	512	3
8	1	64	1	153	7	232	1	336	2	429	1	513	1
9	5	67	1	156	2	235	2	339	2	431	3	515	3
12	4	69	1	157	3	236	2	342	1	432	2	516	1
13	1	72	1	158	1	241	2	344	2	433	1	517	1
15	4	73	2	162	2	242	1	345	1	434	2	519	3
16	1	74	7	163	2	251	1	351	1	436	1	521	3
18	1	78	3	168	1	258	1	352	3	437	1	531	1
23	3	79	1	169	4	262	1	354	2	442	1	533	1
24	2	82	1	171	6	265	1	356	2	445	2	535	2
25	2	83	1	174	5	267	1	358	3	446	1	536	2
26	1	84	1	175	1	272	2	361	3	454	1	541	2
27	4	85	1	176	2	273	1	362	5	457	1	545	1
28	5	86	1	178	1	274	1	363	1	459	2	546	2
31	1	87	2	181	1	275	2	365	1	462	3	547	4
36	1	89	3	184	1	276	5	369	3	463	3	548	1
37	3	91	2	185	1	277	4	374	1	466	4	553	2
38	2	92	3	187	2	281	1	375	2	467	2	554	1
39	2	93	1	188	1	282	1	379	1	469	3	556	2
41	2	94	1	189	1	284	1	381	1	472	2	557	1
42	2	95	1	191	2	292	10	384	2	474	2	563	2
43	1	122	1	192	1	295	2	386	1	477	2	566	2
45	2	124	2	193	1	296	2	387	1	479	1	567	1
48	2	125	1	197	1	298	1	388	3	481	1	568	1
51	2	127	1	198	1	315	1	391	2	483	3	569	4
52	4	129	3	212	1	316	1	393	8	485	2	571	3
53	1	131	2	213	1	317	1	395	1	489	1	574	1
54	1	136	1	215	1	318	2	396	1	491	1	575	1
56	5	141	1	216	2	319	1	397	1	492	1	576	2
57	1	143	2	218	1	322	1	398	5	494	2	579	1

Showing the Number of Alarms from each Box during 1901—Continued.

Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.	Box.	Alarms.
582	1	693	2	779	1	923	1	1243	1	1379	4	1485	1
583	1	694	1	782	1	938	2	1244	1	1387	1	1487	1
584	1	696	3	783	4	941	1	1245	3	1388	2	1491	1
585	1	713	2	784	1	944	1	1249	1	1389	2	1515	1
586	1	715	1	792	1	948	1	1251	1	1397	1	1518	1
587	1	716	1	795	1	951	1	1252	1	1398	1	1522	1
588	1	717	2	796	1	952	1	1255	1	1412	1	1528	1
592	2	718	2	815	1	953	1	1257	1	1414	1	1533	1
596	1	723	2	816	4	954	2	1262	2	1416	2	1534	1
598	1	726	2	819	2	955	1	1266	2	1418	8	1545	1
599	1	728	1	822	1	958	3	1267	1	1419	4	1552	1
612	1	731	2	824	1	959	1	1268	2	1421	5	1553	3
616	3	732	2	826	1	964	2	1272	2	1422	1	1554	1
623	2	733	1	831	1	965	1	1286	1	1424	2	1557	2
626	1	739	1	833	1	969	1	1288	4	1427	2	1558	2
627	2	741	3	835	1	973	1	1289	1	1432	1	1566	1
628	1	745	1	836	1	975	1	1294	2	1433	1	1579	1
629	1	747	3	841	2	976	1	1298	2	1434	1	1584	2
648	1	748	1	858	1	977	1	1299	1	1446	10	1594	1
649	1	749	1	863	1	978	1	1316	1	1447	1	1595	2
651	1	751	2	865	1	991	1	1319	2	1448	1	1597	2
654	1	752	1	874	1	995	1	1324	1	1449	3	1613	1
657	1	754	1	876	4	996	1	1325	1	1456	3	1627	1
663	1	756	1	877	1	1213	5	1339	5	1458	1	1632	1
664	2	757	4	879	1	1215	4	1341	2	1459	1	1652	1
665	2	765	3	883	1	1218	2	1343	1	1463	2	1654	1
667	1	769	1	885	1	1219	1	1347	1	1464	1	1713	2
675	1	771	1	887	1	1221	2	1351	1	1468	1	1948	1
676	1	772	2	893	1	1227	1	1353	2	1471	1	1949	1
677	1	773	1	897	1	1228	2	1357	2	1474	1	1952	1
678	1	774	1	913	1	1234	2	1362	1	1476	4	......	.....
686	2	776	2	914	1	1239	1	1371	1	1481	1	......	.....
688	1	778	1	917	2	1242	1	1372	1	1482	1	......	.....

Showing the Number of Permits Issued to each Company and the Purpose for which Granted during the Year 1901.

	OVERHEAD.							UNDERGROUND.				
	WIRES.				POLES.			APPROVAL.				
	Running of New.	Repairs to and Removal of.	Removal of.	Suspension of Ærial Cables	Erection of	Resetting of.	Removal of.	New Work.	To make Service Connections.	Repairs.	Cable Connections and Repairs.	Totals.
American District Telegraph Co.	17	5	2	......	......	......	......	......	......	......	......	24
American Telephone and Telegraph Co.	......	......	......	1	......	1	......	......	......	1	......	3
Atlantic Refining Co.	......	......	......	......	......	1	......	......	......	......	......	1
Baltimore and Ohio Telegraph Co.	5	1	......	......	......	......	......	......	......	......	......	6
Bell Telephone Company of Philadelphia	10,552	3	6	8	26	19	2	......	......	1	......	10,617
Brush Electric Light Co.	217	15	6	......	106	119	7	......	......	......	......	470
Burnham, Williams & Co.	1	......	......	......	......	......	......	......	......	......	......	1
Bureau of Water	5	1	......	......	1	......	......	......	......	......	......	7
Cheltenham Electric Light, Heat and Power Co.	7	2	......	......	3	1	......	......	......	......	......	13
Diamond Electric Co.	66	......	......	......	19	14	......	......	......	......	1	100
Edison Electric Light Co.	......	......	......	......	......	......	......	12	165	147	......	324

Showing the Number of Permits issued to each Company, etc.—Continued.

	OVERHEAD.							UNDERGROUND.				
	WIRES.				POLES.			APPROVAL.				
	Running of New.	Repairs to and Removal of	Removal of	Suspension of Ærial Cables.	Erection of.	Resetting of.	Removal of.	New Work.	To make Service Connections.	Repairs.	Cable Connections and Repairs.	Totals.
Germantown Electric Light Co.	20	2	1		22	10	1					56
Holmesburg, Tacony and Fkfd. Electric Rwy. Co.		1				1						2
Knickerbocker Ice Co.	2	1										3
Kensington Electric Light Co.	26	2				3						31
Keystone Electric Light Co.	3											3
Keystone Telephone Co.	305											305
Manufacturers' Electric Co.	136	3	1		29	23	3					195
Northern Electric Light and Power Co.	169	9	5		7	25					1	216
Girard Point Storage Co.	1		1									2
Pennsylvania Heat, Power and Light Co.											1	1
Pennsylvania Railroad Co.	16	2	2	1	1	2						24
Philadelphia Local Telegraph Co.		1					1					2

Showing the Number of Permits issued to each Company, etc.—Continued.

	OVERHEAD.							UNDERGROUND.				
	WIRES.				POLES.			APPROVAL.				
	Running of New.	Repairs to and Removal of.	Removal of.	Suspension of Ærial Cables.	Erection of.	Resetting of.	Removal of.	New Work.	To make Service Connections.	Repairs.	Cable Connections and Repairs.	Totals.
Postal Telegraph Cable Co	7	......	......	1	1	1	......	......	......	......	......	10
Philadelphia and Reading Railroad Co	1	1	......	......	......	......	......	......	......	......	......	2
Philadelphia, Reading & Pottsville Telegraph Co	22	5	1	......	3	2	1	......	......	......	......	34
Pneumatic Fire Alarm Telegraph Co	1	......	......	......	......	......	......	......	......	......	......	1
Powelton Electric Co	123	4	1	......	46	44	......	......	......	......	......	218
Southern Electric Light and Power Co	38	......	......	......	26	12	......	......	......	......	......	76
Suburban Electric Co	43	1	......	......	23	8	......	......	......	......	......	75
Union Traction Co	29	13	2	......	26	39	17	......	3	......	......	129
United Gas Improvement Co	2	3	1	......	......	1	......	......	......	......	......	7
West End Electric Co	5	1	......	......	......	5	......	......	......	......	......	11
Western Union Telegraph Co	24	28	4	1	1	10	7	......	......	......	......	75
Wissahickon Electric Light Co	41	1	1	......	9	18	2	......	......	......	......	67
Total	11,884	105	34	12	349	354	41	12	168	149	3	13,111

Number of Electric Lights Authorized in each Ward, together with the Number of Free Lights, December 31, 1901.

Wards.	**Number of Lights Overhead.**	**Underground.**		**Total.**	**Grand Total.**
		On City Cables.	**On Other Cables.**		
First	120	8	......	128	
Second	163	23	......	186	
Third	147	34	......	181	
Fourth	167	3	......	170	
Fifth	131	......	36	167	
Sixth	102	35	13	150	
Seventh	198	12	21	231	
Eighth	106	34	68	208	
Ninth	98	71	15	184	
Tenth	134	14	41	189	
Eleventh	139	......	2	141	
Twelfth	138	......	8	146	
Thirteenth	112	13	6	131	
Fourteenth	150	50	8	208	
Fifteenth	191	128	7	326	
Sixteenth	148	......	12	160	
Seventeenth	148	......	13	161	
Eighteenth	231	......	1	232	
Nineteenth	294	24	......	318	
Twentieth	266	13	26	305	
Twenty-first	219	......	......	219	
Twenty-second	314	......	......	314	
Twenty-third	256	......	......	256	
Twenty-fourth	257	30	......	287	
Twenty-fifth	239	......	......	239	
Twenty-sixth	176	69	4	249	
Twenty-seventh	255	......	5	260	

Number of Electric Lights, Etc.—Continued.

Wards.	Number of Lights Overhead.	Underground. On City Cables.	Underground. On Other Cables.	Total.	Grand Total.
Twenty-eighth	173			173	
Twenty-ninth	229	55		284	
Thirtieth	206	41		247	
Thirty-first	242			242	
Thirty-second	232	55		287	
Thirty-third	236			236	
Thirty-fourth	299			299	
Thirty-fifth	203			203	
Thirty-sixth	199	21	6	226	
Thirty-seventh	132	19		151	
Thirty-eighth	168	20		188	
Thirty-ninth	173			173	
Fortieth	155			155	
Forty-first	213			213	
Gray's Ferry Bridge			12	12	
Callowhill Street Bridge	13			13	
Market Street Bridge		4		4	
Chestnut Street Bridge	4			4	
Walnut Street Bridge		21		21	
Girard Avenue Bridge		4		4	
South Street Bridge	6			6	
Falls of Schuylkill Bridge	7			7	
Penrose Ferry Bridge	6			6	
Chestnut Street Pier				20	
Arch Street Pier				3	
Race Street Pier				17	
Total	7,794	801	304		8 939

Number of Electric Lights, etc.—Continued.

GIRARD ESTATE LIGHTS.					
Delaware avenue, from Vine to South street	26				
Front street, from Vine to South street	......	......	24		
Total Girard Estate Lights	......	......	......	50	50
FREE LIGHTS.					
Cheltenham Electric Light and Power Co.	......	......	......	5	
Diamond Electric Company	......	......	......	10	
Germantown Electric Light Company	......	......	......	5	
Manufacturers' Electric Company	......	......	......	11	
Northern Electric Light and Power Company	......	......	......	10	
Powelton Electric Company	......	......	......	10	
Southern Electric Light and Power Company	......	......	......	10	
Suburban Electric Company	......	......	......	5	
West End Electric Company	......	......	......	15	
Kensington Electric Company	......	......	......	10	
Peoples' Traction Company	......	......	......	3	
Total Free Lights	......	......	......	......	94
Grand Total	......	......	......	......	9,083

Number of Miles of Overhead and Underground Wires.

Overhead Wires.	Mileage of Wires on City Poles.	Mileage of Wires on other Poles.	Mileage of Wires on Fixtures and Buildings.	Mileage of Conductors in Aerial Cables.	Total.
American District Telegraph Co	2.83	....	80.33	....	83.16
American Telegraph & Telephone Co	....	266.73	45.58	....	312.31
Ammonia Company of Philadelphia	....	2.25	....	....	2.25
Atlantic & Pacific Telegraph Co	....	1.92	....	....	1.92
Atlantic Refining Co	10.00	10.00	12.00	....	32.00
Baltimore & Ohio Telegraph Co	2.00	....	....	....	2.00
Bell Telephone Co. of Philadelphia	34.2	1,449.3	2,474.3	4,121.298	8,079.098
Brush Electric Light Co	76.01	290.85	....	....	366.86
Cheltenham E. L. Heat & Power Co	....	13.05	....	....	13.05
Diamond Electric Co	17.32	146.66	....	....	163.98
Elkinton, Jos. S. & Thos	8.00	....	....	....	8.00
Germantown Electric Light Co	25.34	101.96	....	....	127.30
Girard Point Storage Co	13.00	....	....	....	13.00
Harrison Bros. & Co	4.16	5.34	.50	....	10.00
Holmesb'g, Tac'y & Frankf'd P. R. Co	....	50.55	....	....	50.55
Kensington Electric Co	23.00	51.00	....	....	74.00
Keystone Telephone Co	....	....	132.09	....	132.09
Knickerbocker Ice Co	7.82	.36	4.18	....	12.36
Manufacturers' Electric Co	51.76	166.76	....	....	218.52
Mutual Union Telegraph Co	....	140.66	....	....	140.66
Northern Electric Light & Power Co	17.50	130.25	....	....	147.75
Pennsylvania Railroad Co	10.70	70.45	3.03	....	84.18
Philadelphia Local Telegraph Co	2.98	26.98	.10	....	30.06
Philadelphia Local Telegraph Co	1.10	26.15	4.40	....	31.65
Phila., Read'g & Pottsville Tele. Co	3.36	6.18	....	....	9.54
Pneumatic Fire Alarm Telegraph Co.	1.25	....	26.25	....	27.50
Postal Telegraph Cable Co	3.14	219.54	13.14	....	235.82
Powelton Electric Co	55.19	209.99	....	....	265.18
Roxb'h, Chest. Hill & Norrist'n Ry. Co	....	49.20	....	....	49.20
Southern Electric Light & Power Co.	57.60	270.50	....	....	328.10
Southwestern Street Railway Co	....	13.17	....	....	13.17

Number of Miles of Overhead and Underground Wires—Continued.

Overhead Wires.	Mileage of Wires on City Poles.	Mileage of Wires on other Poles.	Mileage of Wires on Fixtures and Buildings.	Mileage of Conductors in Aerial Cables.	Total.
Suburban Electric Co.	21.61	267.59	....	....	289.20
Union Traction Co.	....	580.84	....	....	580.84
United Gas Improvement Co.	27.73	5.86	....	....	33.59
United States Electric Lighting Co.	7.81	42,01	....	....	49.82
West End Electric Co.	6.00	24.50	....	....	30.50
Western Union Telegraph Co.	.26	392.67	....	....	392.93
Wissahickon Electric Light Co.	9.91	53.75	....	....	63.66
	501.58	5,087.02	2,802.83	4,121.298	12.512.728
City Wires	....	....	....	....	1,621.72
Total Overhead Wires	....	....	....	....	14,134.448

Underground Wires.	Electric Light and Power Wires.	Telephone and Telegraph Wires.	Total.	Grand Total.
American District Telegraph Co.	....	9.91	9.91	
American Telegraph and Telephone Co.	....	1,836.41	1.836.41	
Bell Telephone Co. of Philadelphia	....	84,548.558	84,548.558	
Brush Electric Light Co.	43.64	....	43.64	
Columbia Electric Light Co.	22.96	....	22.96	
Edison Electric Light Co.	173.41	....	173.41	
Girard Estate	6.92	....	6.92	
Kensington Electric Co.				
Keystone Electric Light Co.				
Keystone Telephone Co.	....	6,016.43	6,016.43	
Manufacturers' Electric Co.	5.14	....	5.14	
Northern Electric Light and Power Co.	13.25	....	13.25	

Number of Miles of Overhead and Underground Wires— Continued.

Underground Wires.	Electric Light and Power Wires.	Telephone and Telegraph Wires.	Total.	Grand Total.
Pennsylvania Heat, Light and Power Co.	68.40	....	68.40	
Pennsylvania Railroad Co.	....	207.17	207.17	
Pneumatic Transit Co.				
Postal Telegraph Cable Co.	....	878.21	878.21	
Powelton Electric Co.	1.00	....	1.00	
Philada., Reading and Pottsville Tel. Co.	....	8.27	8.27	
Union Traction Co.	923.93	....	923.93	
West End Electric Co.	13.65	....	13.65	
Western Union Telegraph Co.	....	826.72	826.72	
City	52.22	3,893.6	3,945.92	
Total Underground Wires	1,324.62	98,225.278	....	99,549.898
Total Overhead and Underground Wires	....	....	....	113,684.346

Summary of Underground Conduits.

	Number of Conduits.	Length in Feet of Conduit.	Length in Feet of Duct.	Miles of Duct.
American Telegraph & Telephone Co...	76	262,499	1,928,578	365.26
Bell Telephone Co. of Philadelphia.....	1,730	956,410	4,456,845	844.10
Brush Electric Light Co.................	12	57,320	1,164,593	220.56
Columbia Electric Light Co............	13	17,849	112,849	21.35
Diamond Electric Co....................	23	4,663	55,514	10.51
Drexel & Co..............................	1	559	559	.11
Edison Electric Light Co...............	620	389,066	947,962	179.54
Girard Estate............................	21	27,247	147,951	28.02
Kensington Electric Co.................	2	10,800	85,800	16.25
Keystone Light & Power Co............	20	5,543	5,543	1.05
Keystone Telephone Co...............	268	1,683,342	4,652,644	881.10
Manufacturers' Electric Co.............	5	4,700	37,800	7.16
Northern Electric Light & Power Co.....	23	26,217	254,275	48.24
Penn Electric Light Co..................	58	122,186	473,609	89.69
Pennsylvania Heat, Light & Power Co..	29	19,319	319,491	60.51
Philadelphia, Reading & Pottsville Telegraph Co..........................	2	1,016	3,186	.60
Pneumatic Transit Co...................	34	16,186	22,649	4.29
Powelton Electric Co....................	2	322	3,769	.71
Strawbridge & Clothier..................	1	45		
Union Traction Co.......................	677	1,049,482	8,716,754	1,650.90
West End Electric Co....................	8	14,410	94,470	17.94
City.......................................	169	376,796	2,803,278	530.92
Total................................	3,794	5,045,977	26,288,119	4,978.81

Return of License Charges for Attachments to City Poles, Maintenance of Poles, Erection of Poles, and Mileage of Wire Overhead for the Year 1901.

	Attachments.		Maintenance of Poles.		Erection of Poles.		Wire on City Poles.		Wire on other Poles and Buildings.		Total.		Total Charges.
	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	
American District Telegraph Co.	$38 00		$9 00				$5 00		$202 50		$254 50		$254 50
American Telegraph & Telephone Co.			96 00						480 00		576 00		576 00
Ammonia Company of Philadelphia.	1 00		2 00				7 50				10 50		10 50
Atlantic & Pacific Telegraph Co.				$225 00						$5 00		$230 00	230 00
Atlantic Refining Co.	154 50		5 00				25 00		55 00		239 50		239 50
Baltimore & Ohio Telegraph Co.	28 50						5 00				33 50		33 50
Bell Telephone Co. of Philadelphia.	546 50		3,372 00		$730 00		65 00		13,712 50		18,426 00		18,426 00
Brush Electric Light Co.	1,160 50		2,771 00		2,450 00		345 00		1,235 00		7,961 50		7,961 50
Cheltenham Electric Light, Heat & Power Co.			110 00		15 00				32 50		157 50		157 50
Diamond Electric Co.	537 50		1,095 00		435 00		125 00		640 00		2,832 50		2,832 50
Elkinton, Joseph S. & Thomas	124 50						20 00				144 50		144 50
Germantown Electric Light Co.	529 00		1,018 00		585 00		130 00		520 00		2,782 00		2,782 00
Girard Point Storage Co.	77 00						25 00				102 00		102 00
Harrison Bros. & Co.	67 50		44 00				10 00		15 00		136 50		136 50
Kensington Electric Co.	304 50		312 00				115 00		260 00		991 50		991 50
Knickerbocker Ice Co.	103 50						22 50		10 00		136 00		136 00
Manufacturers' Electric Co.	995 50		1,412 00		345 00		240 00		875 00		3,867 50		3,867 50

Return of License Charges for Attachments to City Poles, etc.—Continued.

	Attachments.		Maintenance Poles.		Erection of Poles.		Wire on City Poles.		Wires on other Poles and Buildings.		Total.		Total. Charge.
	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	Paid.	Unpaid.	
Mutual Union Telegraph Co				$306 00						$352 50		$658 50	$658 50
Northern Electric Light & Power Co	$744 50		$530 00		$20 00		$210 00		$675 00		$2,179 50		2,179 50
Pennsylvania Railroad Co	173 50		83 00				30 00		180 00		466 50		466 50
Philadelphia Local Telegraph Co	22 00		235 00				2 50		77 50		337 00		337 00
Philadelphia Local Telegraph Co		42 00						$7 50		42 50		92 00	92 00
Phila., Read'g & Pottsville Tel'g. Co		40 00		75 00				10 00		15 00		140 00	140 00
Pneumatic Fire Alarm Telegraph Co	18 50						2 50		57 50		78 50		78 50
Postal Telegraph Cable Co		7 50		290 00				7 50		620 00		925 00	925 00
Powelton Electric Co	1,008 00		2,026 00		1,360 00		255 00		920 00		5,569 00		5,569 00
Southern Electric Light & Power Co.	979 50		2,067 00		860 00		285 00		1,200 00		5,391 50		5,391 50
Suburban Electric Co.	220 50		1,879 00		120 00		40 00		1,205 00		3,464 50		3,464 50
United Gas Improvement Co	547 00		23 00				90 00		15 00		675 00		675 00
United States Electric Lighting Co.	317 00		490 00				80 00		270 00		1,157 00		1,157 00
West End Electric Co	19 00		126 00				5 00		70 00		220 00		220 00
Western Union Telegraph Co				714 00			2 50			980 00	2 50	1,694 00	1,696 50
Wissahickon Electric Light Co	234 50		534 00		225 00		50 00		260 00		1,303 50		1,303 50
Total	$8,952 00	$89 50	$18,239 00	$1,610 00	$7,145 00		$2,192 50	$25 00	$22,967 50	$2,015 00	$59,496 00	$3,739 50	$63,235 50

Appropriation to the Department of Public Safety (Electrical Bureau), with the Expenditures and Balances for 1901.

Item.			Approp'd.	Counters'd.	Merging.	Not merging.
1	For Salaries:					
	Chief	$5,000 00				
	Provided, That he shall give his entire time and individual attention to the duties of the office.					
	Manager	3,000 00				
	Assistant manager	1,600 00				
	Assistant manager	1,500 00				
	Chief clerk	2,000 00				
	First ass't clerk	900 00				
	Second ass't clerk	750 00				
	Stenographer and typewriter	600 00				
	Draughtsman	1,000 00				
	Chief line inspector, $1,200, and uniform, $40	1,240 00				
	Eight inspectors, $1,180 each, and uniforms, $40 each	9,760 00				
	Twenty-two operators, $1,100 each, and uniforms, $40 each	25,080 00				
	Foreman, $900, and uniform, $40	940 00				
	Eight linemen, $850 each, and uniforms, $40 each	7,120 00				
	Batteryman	900 00				
	Ass't batteryman	700 00				
	Electrical plumber, $1,000, and uniform, $40	1.040 00				
	Two assistant electrical plumbers, $900 each, and uniforms, $40 each	1,880 00				
	Two janitors, $250 each	500 00				
	Transferred from, ord. app'd Oct. 23, 1901	800 00				
	Transferred from, ord. app'd Dec. 12, 1901	525 00				
			$64,185 00	$63,665 65	$519 35	
2	For repairs, instruments, supplies and labor	$20.000 00				
	Rec'd by transfer, ord. app'd Oct. 23, 1901	4,000 00				
			24,000 00	23,390 73	609 27	
3	For iron posts, mast arms, hauling, supplies, materials and labor	$3,000 00				
	Transferred from, ord. app'd Dec. 12, 1901	500 00				

Item.		Approp'd.	Counters'd.	Merging.	Not merging.
	Item 3—Continued. Transferred from, ord. app'd Dec. 20, 1901 .... 500 00	$2,000 00	$1,997 40	$2 60	
4	For maintenance and keep of horse and wagon .... $400 00 Transferred from, ord. app'd Oct. 23, 1901 .... 150 00	250 00	233 34	16 66	
5	For keep of horse and wagon for chief line inspector,	400 00	400 00		
6	For acids, batteries and materials .... $6,000 00 Received by transfer, ordin'ce approved June 13, 1901 .... 4,000 00	10,000 00	9,986 31	13 69	
7	For stationery, printing, advertising, car fares, car tickets and incidentals, $4,000 00 Received by trans., ord. appr'd Oct. 23, 1901 .... 1 500 00 Received by trans., ord. appr'd Dec. 12, 1901 .... 500 00 Received by trans., ord. appr'd Dec. 20, 1901 .... 700 00	6,700 00	6,652 25	47 75	
8	For painting telegraph poles, electric light poles, cross arms, mast arms and patrol boxes	3,000 00	2,996 10	3 90	
9	For ice	150 00	75 37	74 63	
10	For the improvement and extension of the Police and Fire telegraph	10,000 00	10,000 00		
11	For the purchase or rent of telephones, purchase of materials and instruments, extension of the lines and hospital and armory service, including brigade headquarters National Guards of Pennsylvania, Presbyterian, Children's Homœopathic, St. Mary's, Orthopædic, Samaritan, Jefferson, West Philadelphia for Women, Howard, St. Agnes, University, St. Christopher for Children, Fred. Douglass, Medico-				

Appropriations, Expenditures and Balances—Continued.

Item.		Approp'd.	Counters'd.	Merging.	Not merging.
	Item 11—Continued:				
	Chirurgical, Polyclinic, Women's Hospital, North College ave. and Twenty-second street, Jefferson Maternity, Washington Square, Methodist Episcopal and St. Joseph's Hospitals, Naval Reserve Armory, at one hundred dollars each, per annum......	$7,500 00	$7,306 57	$193 43	
12	For the improvement and extension of police signal and telephone service....	8,000 00	7,900 96	99 04	
13	For cables, conduits, manhole covers, iron posts, mast arms, hauling, cartage, materials and labor for underground electrical service. All manhle covers to be deadened. 25,000 00 Received by transfer, ord. app'ed October 23, 1901.. 2,000 00 Appropriation from Temporary Loan, Ord. approved Dec. 20, 1901...... 8,500 00	35,500 00	30,424 81	5,075 19	
14	For labor, lamps, wiring, materials, current and repairs for police, patrol and fire stations. $8,000 00 Received by transfer, ord. approved Dec. 12, 1901...... 1,200 00 Received by transfer, ord. approved Dec. 20, 1901...... 1,250 00	10,450 00	10,149 19	300 81	
15	For electric lighting 929,667 80 Transferred from, ord. app'd June 13, 1901........... 5,000 00 Transferred from, ord. app'd Oct. 23, 1901........... 1,600 00 Transferred from, ord. app'ed Dec. 12, 1901......... 1,575 00	921,492 80	920,362 56	1,130 24	
16	For purchase and laying of underground conduits, and constructing manholes....	30,000 00	29,954 55	45 45	

Appropriations, Expenditures and Balances—Continued.

Item.		Approp'd.	Counters'd.	Merging.	Not merging.
17	For rent of telephones with exchange service in office of District Surveyors (Bureau of Surveys). $1,800 00 For rental and purchase of instruments, switchboards, etc., for telephonic service in the Bureau of Water... 800 00	$2,600 00	$2,525 33	$74 67	
18	For new electric lights. *Provided*, The new lights be erected not later than May 1......................	35,000 00	34,380 05	619 95	
19	For cables, wires, instruments and labor in fitting up terminal room in City Hall. Balance brought over from books of 1900...	865 87	624 75	241 12	
20	Appropriation out of loan authorized by ordinance of Councils of June 17, 1898, for electrical service and underground construction, purchase of conduits, cables and instruments. Brought over from books of 1900........	18,126 23	18,107 96	18 27	
21	For the purpose of installing electrical appliances in connection with the pipe line system. Received by transfer, ord. app'd July 13, 1901...... $7,000 00 Received by transfer, ord. app'd December 20, 1901 2,400 00	9,400 00	8,582 22	817 78	
22	For Salaries: Superintendent of electric lighting. $1,250 00 Foreman, $3.50 per day; engineers, $3 per day; firemen, $2.25 per day; dynamo men, $2,50 per day; wiremen, $2.50 per day. wiremen (second-class), $2.25 per day; helpers (first-class), $2.00 per day; helpers (second-class). $1.75 per day......... 18,186 00	19,436 00	17,943 94	$1,492 06	

Appropriations, Expenditures and Balances—Continued.

Item.		Approp'd.	Counters'd.	Merging.	Not merging.
	Item 22—Continued. Received by transfer, ord. app'd June 26, 1901.				
23	For maintenance of building—For electric light supplies and repairs ...... Received by transfer, ord. approved June 26, 1901.	$841 55	$805 76	$35 79	
24	For general construction work—For installing electric wiring................ Received by transfer, ord. approved June 26, 1901.	1,693 50	1,633 73	59 77	
		1,221,590 95	1,210,099 53	$11,491 42	

PROOF.

Total appropriation for 1901...................		$1,221,590 95
Amount countersigned	$1,210,099 53	
Amount merging........	11,491 42	
		$1,221,590 95